2000

Agricultural Trade Liberalization and Uneven Development: the Case of South Korea.

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AGRICULTURAL TRADE LIBERALIZATION AND UNEVEN DEVELOPMENT: THE CASE OF SOUTH KOREA

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Geography and Anthropology

by
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May 2000

ACKNOWLEDGEMENTS

My doctoral studies and dissertation research would not have been possible without guidance and support from numerous people. First and foremost, I express my gratitude from the bottom of my heart to my mentor, Dr. Gregory Veeck. I am immensely indebted to him for his enthusiasm, advice, and edification for the completion of my doctoral studies. Not only did his academic guidance give me everlasting lessons, but also his brilliant ideas, ceaseless encouragement, and judicious criticism salvaged me whenever I almost drowned in a swamp of self-doubts. He was a guiding light for my education at LSU.

I also owe a debt of gratitude beyond expression to my other committee members. To Dr. Miles Richardson, I owe enormous thanks for introducing me to the intriguing field of cultural anthropology and for opening my eyes to the values of humanity, open-mindedness, and compassion. I look up to him for his mind of grand capacity as well as for his great scholarship. I sincerely thank Dr. William Davidson, the chair of the Department of Geography and Anthropology, for providing his constant guidance and care throughout my studies at LSU. I also owe a great deal of gratitude to Dr. Anthony Lewis for his kindness to serve on my committee with a short notice, genuine interest in my topic, careful reading of my dissertation, and insightful comments. Special thanks go to Dr. Jeffrey Gillespie for sharing his expertise and time and providing thoughtful comments. Sincere appreciation is extended to Dr. Nina Lam for all of the useful lessons I had from her classes. I am grateful for the financial support from the Department of

Geography and Anthropology, Dr. John Pine in the Institute for Environmental Studies, and the Korean Student Assistance Awards Program from NAFSA. Appreciation is extended to Xueping Ru, Wende Wu, and Dr. Sukhamay Kundu at LSU for keeping a warm friendship with me.

In Korea, I must extend my deep appreciation to Dr. Chan Lee who brought me to the knowledge of Dr. Fred Kniffen and LSU. Sincere thanks also go to Dr. Booshik Kim, Dr. Changju Lim, Dr. Youngsung Kim, and Dr. Eunsook Lee at Sangmyung University who motivated me to challenge myself towards ever-higher goals.

Regarding my fieldwork, I could not have completed my survey without the immense help and information provided by a number of officials from the Rural Guidance Offices in Ichon-shi, Pyongtaek-shi, Chongup-shi, Andong-shi, and Bonghwa-gun; and from Taein Farmers' Consultation Office. Most importantly, I express my deepest gratitude to all of the farmers who generously shared their time and personal accounts. My dissertation would not have been feasible without the invaluable help from these individuals.

Last but not least, to my parents and two younger sisters, I am forevermore grateful for their support, devotion, and faith. I could never have completed this long journey had it not been for their sacrifice and dedication to my education. Especially my mother's care and the memory of my late grandmother sustained me through the dark periods of my life. Their unconditional love made this work possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The Uruguay Round of the General Agreement on Tariffs and Trade (GATT), which was concluded in 1993, was the principal global forum to discuss agricultural trade in an extensive way. In this last venue of the GATT, South Korean negotiators had to agree to open the nation's agricultural markets so as to assure manufacturing export access to international markets amidst heightening pressure from surplus agricultural producers. A broad range of economic studies have estimated that as an aftermath of the Uruguay Round, a majority of South Korean farmers, who are comparatively disadvantaged due to small-scale, labor-intensive farming, might be displaced.

In this context, the present study explores how South Korean farmers are encountering increasingly adverse free market forces as restructuring in the agricultural sector is proceeding in tandem with the comprehensive globalization process of the Korean society and economy. Based on a survey sample of 483 farm households in three provinces of South Korea, this research examines the perspectives of full-time farmers regarding trade liberalization, its effects on their lives, and the future of small-scale farming. The findings from the survey in this research indicate that South Korean farmers accede to terms of global integration in principle while disapproving state rural policies in practice. The survey data also indicate intra-regional differences in farmers' perceived satisfaction with living conditions, government farm policies, and socio-economic issues. Disparities in the degrees of discontent with government policies and socio-economic well-being are

explicit between the relatively diversified, urbanizing Kyonggi Province and the underdeveloped, farming-dependent Chunbuk and Kyongbuk Provinces. The overall findings uphold that most farmers who have not been fully exposed to free market mechanisms are confronted by increased uncertainties and economic hardships. The findings propound that agricultural policies need to reflect long-term, macroeconomic changes and locally-based agricultural structure. Harnessing the agriculture, trade, and environment interface is, thus, suggested as a way to provide equitable economic bases to individual farm families and rural communities.

CHAPTER I
INTRODUCTION

Since 1947, the General Agreement on Tariffs and Trade (GATT) had held recurrent renegotiations, or periodic rounds, until the establishment of the World Trade Organization (WTO) in 1995 to reduce tariffs and improve equal treatments among its members. The Uruguay Round, the last venue for the GATT, ended in 1993 after nearly eight years of negotiations, and its agreements were officially ratified by all member nations in 1994. The major agendas in the Uruguay Round included "the new antidumping, subsidies, and safeguard agreements; balance-of-payments in the GATT; liberalization of textiles and agricultural trade; and rules and procedures regarding dispute settlements" (Jones 1994: 173). Among these agendas, agriculture received an unprecedented level of political economic inquiry and deliberation in the context of the GATT. The negotiators, however, ultimately had to reconcile differences in each nation's position for reforming both domestic and global agricultural production and trade. As a part of the agreements, nation-states are now decreasing tariffs as well as support and export subsidies in agriculture.

The Uruguay Round has implied that changes in agriculture[1] are increasingly subjected to external forces rather than internal forces. Numerous

[1] Le Heron (1993) argues that the concept of "agriculture" needs to be differentiated from that of the term "farming" in that agriculture incorporates natural products and processes into industrialized production, while farming merely connotes an array of activities related to agriculture. In this study, however, both terms are interchangeably used without contrasting the two concepts.

studies unanimously point out that the effects of the agreements go far beyond the economic provisions particularly because food and agricultural policies are intrinsically associated with such critical issues as food security, social welfare, and environmental protection (Marsden et al. 1990; Le Heron 1993; Han 1994; Ingersent et al. 1994). Equally significant, they are also directly related to "local survival in material and cultural senses" (McMichael 1995: xiv).

Within the complex global interrelations, this movement towards the free market has encountered skepticism regarding the possible implications to South Korean agricultural trade liberalization. The main reason for the concerns stem from the past policies of institutionalized protectionism of the South Korean farm sector. Until the Uruguay Round, South Korea protected its key agricultural commodity sectors primarily by subsidizing both the prices received by farmers and the prices paid by consumers. South Korean negotiators in the Uruguay Round, however, agreed to open up the nation's agricultural market so as to assure manufacturing exports access to international markets amid heightening pressure from surplus agricultural producers. A broad range of economic studies have estimated that as an aftermath of the Uruguay Round, a majority of South Korean farmers, who are comparatively disadvantaged due to small-scale, labor-intensive, family-oriented agriculture, may have to discontinue farming as their way of life (Anderson and Ahn 1984; Anderson 1989; Kim K. 1991; Lee H. 1996; Glasure and Lee 1994). This will possibly have wide ranging consequences including a

restructuring of the work force, high levels of rural unemployment, new migratory patterns, and the exacerbation of regional socio-economic disparities.

Whereas an immediate exogenous cause of enforcing the Korean agricultural sectoral adjustment can be traced to a modification in the world trade regime, an underlying endogenous cause can be found in the existence of uncompetitive agriculture within the export-oriented industrialization scheme of the country. From the South Korean perspective, the farm sector had to be protected mainly for the sake of the nation's political-economic and cultural-ideological structures. After the Korean War, South Korea established its agricultural policy to have domestic food production increased sufficiently enough to feed the nation. Until the Uruguay Round, food self-sufficiency served the primary rationale behind agricultural and rural development in the nation. From the late 1960s through the 1980s, an enormous economic expansion occurred from export-oriented industrialization. In the process of rapid economic growth, the agricultural price support system played a critical role in lowering food prices for the benefit of wageworkers employed in the manufacturing sector. Although rice as staple was heavily protected, imports of other farm products especially from the United States kept grain prices low.

South Korea's rural development programs, nevertheless, manifested the myriad aspects of the nation's authoritarian tradition and did not represent a significant departure from the urban-industrial development strategy. Accordingly, the agricultural sector came to rely on government subsidies and institutionalized

protectionism. Impending complete agricultural market opening, therefore, poses fundamental adjustment problems in the farm sector. The current global trend of economic and spatial convergence shows that the degree to which the nation-state can secure domestic food production is dependent upon the dynamics of the global political economy of agriculture.

This research is based upon the structural changes of South Korean agriculture specifically occasioned by the Uruguay Round agreements and South Korean farmers' attitudes towards rural issues and concerns affected by the changing forces internal and external to agriculture. It is concerned with ascertaining how farmers perceive, and cope with, the ensuing adjustment of the agricultural sector to liberalization whereby institutionalized protectionism of agricultural commodities are removed. In other words, this research seeks to obtain the global perspective on changes of the national agro-food system and to reflect local farmers' perceptions of and responses to these external changes. It is hoped that this research will shed light on interactions between global forces and local communities and illustrate local struggles for survival and control over diverse aspects of agricultural production.

1.1 Research Objectives

The Uruguay Round negotiations of the GATT indicated that agricultural protectionism in nation-states was deeply embedded within a national political-economic system, which transnational corporations now vigorously endeavor to overtake. Agricultural trade liberalization is viewed as a shift from "residual"

national ideals and beliefs guarded by instituted protectionism to "emergent" global restructuring of resources and free trade (McMichael 1995). Agro-industrialization and commercialization on a global scale has immediate impacts on small farmers especially in developed market economies, who were formerly protected by national ideology. The focus of this study is placed on farmers' perspectives on trade liberalization and its effects on their lives in the context where nation-states increasingly rest on the functions of the global political economy of agriculture for their food production.

The objectives of this research are, then, (1) to identify and better understand both exogenous and endogenous factors of agrarian changes in South Korea, (2) to inquire into structural conditions and limits of the nation's agriculture in the face of progressing liberalization, (3) to explore the relationships of farmers' attitudes towards agricultural trade liberalization, state policies, and rural concerns with their location and socio-economic characteristics, and (4) to examine the viability of small family farming as the agricultural sector undergoes peripheralization in the nation's intersectoral economic specialization.

An understanding of farmers' perspective and socio-political forces encompassing the farm household would offer a referential point to policy makers for the improvement of prospects of rural communities. Indeed, identifying farmers' attitudes towards government policies pertaining to trade and rural situations would help foretell progressing changes in the farm sector. In this respect, the present study seeks to help formulate possible strategies

which may assure the livelihood of small family farming. This study on the South Korea's agrarian development dilemma will illustrate how traditional agricultural areas in many nations are being modified by agro-industrial and commercial influences on local family farm households across the globe.

1.2 Overview of Methods and Research Area

Information on the major factors posing structural adjustment problems on South Korean agriculture and farmers' perspectives on government policies and rural issues are derived from (1) an analysis of relevant literature and statistical documents, (2) a survey via mail, and (3) personal interviews with farmers and local government officials (Figure 1.1 and 1.2).

Firstly, a conceptual framework for discussion on rural issues and concerns was constructed from a review of relevant fields of study, government statistical documents, and the news media. Specific references to the Korean historical experience were also made to understand the current rural socio-economic landscape of the nation.

Secondly, to collect empirical data, a mail survey was conducted during June and July of 1997. The questionnaire was designed to gather information on respondents' opinions about agricultural trade liberalization, government policies, current rural issues, and the rural quality of life as well as household economic and demographic data. Open-ended questions were also included to obtain farmers' opinions in their own words. Questionnaires were sent out to a sample of 630 farm households, 210 each in three South Korean provinces: Kyonggi, Chunbuk, and

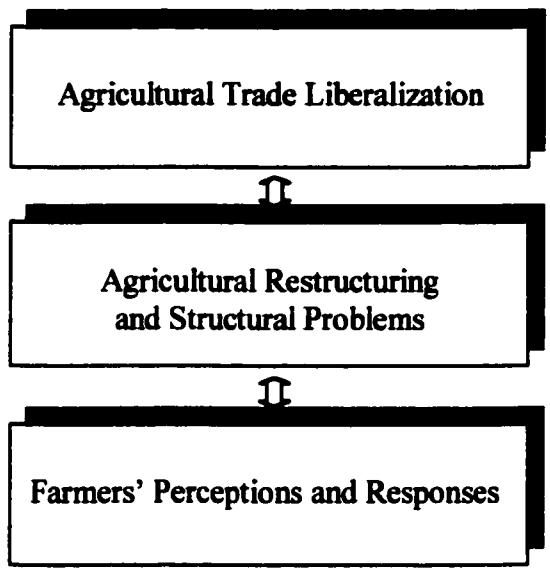

Figure 1.1 Market Opening and Agricultural Restructuring

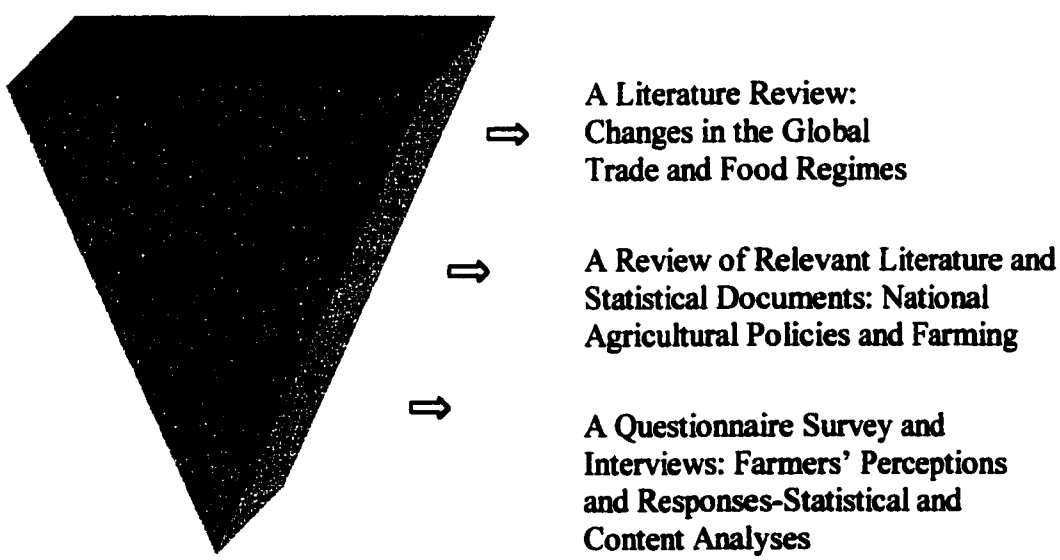

Figure 1.2 Research Methods and Subjects

Kyongbuk (Figure 1.3). These three provinces were selected on the basis of their levels of economic development, their agricultural structure and resources, and their distinct locations. A total of 483 responses were utilized for the subsequent analyses of data.

Thirdly, the mail-out survey was supplemented with face-to-face interviews with farmers and local government officials in the three provinces in order to incorporate implicit problems which the questionnaire might not effectively identify and to obtain a comprehensive outlook of farming structure, rural living conditions, and major socio-economic issues. The interview results were collated with the questionnaire data.

For an analysis of quantitative data collected from the survey, descriptive and analytical statistical methods were employed. The data were classified and compared according to the survey location and an array of socio-economic variables. This statistical analysis consisted of three major steps: (1) a descriptive analysis of the sample through the use of contingency tables and the chi-square test, (2) a reduction of scale items using factor analysis and a generation of new composite indices of opinions, and (3) comparisons of the indices by location, types of farming, and socio-demographic variables. In addition, to complement the lack of the contextual information in the statistical analysis, a content analysis was also conducted using the respondents' remarks on the open-ended inquiries in the questionnaire. A statistical analysis and its findings are

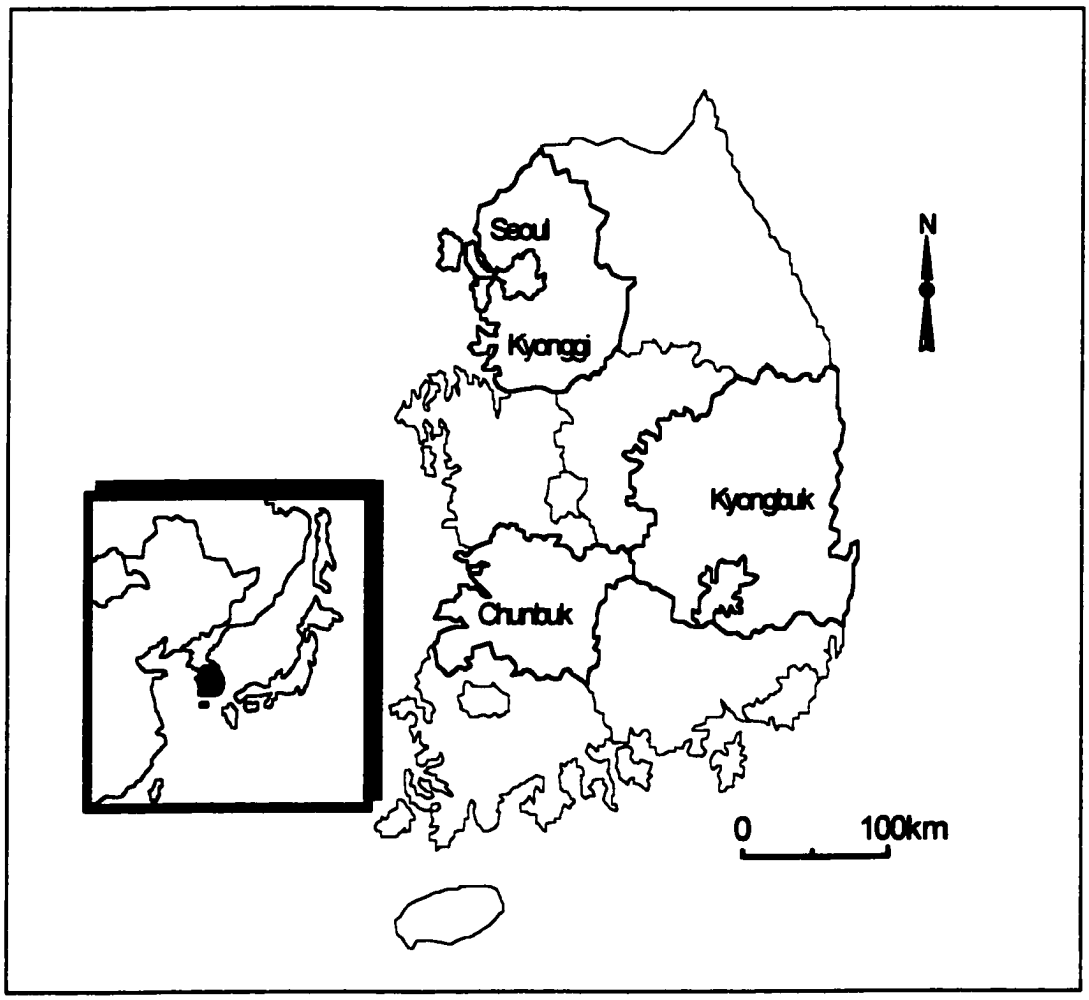

Figure 1.3 Locations of the Survey

discussed in Chapter V and Chapter VI, and the results of a content analysis are presented in Chapter VII.

It should be noted that this study does not assess the economic effects of agricultural trade liberalization. Much of the research which has explored transformations occurring in rural areas of industrializing or industrialized countries has focused on the macro level of economic indicators. With respect to the quantification of the real income effects of multilateral trade reform, there are a large array of partial and general equilibrium models of regional, national, and global markets for farm products (Anderson and Warr 1987; Moon and Kang 1989; Kim Y. 1991; Bellamy and Greenshields 1992). Rather, this study seeks to show that agrarian changes are configured by a concurrent operation of domestic structural factors and global economic forces.

1.3 Organization of Contents

This study consists of eight chapters, including three chapters introducing the theoretical and historical context of the research subject, three chapters presenting empirical findings from analyses of the survey data, and the conclusion.

Chapter II discusses the conceptual framework of this study based on international trade, regional development, and globalization of the national agro-food system. It highlights the linkages between global forces, state roles, and local conditions.

Chapter III examines the historical process through which the world trade regime evolved from the GATT to the WTO, the issues at stake in the Uruguay Round agricultural negotiations, and the national perspectives of the major negotiators. This chapter presents a summary view of the agricultural negotiations in the Uruguay Round.

Chapter IV introduces the development of a land use policy in South Korea and the structural characteristics of the nation's agriculture. This chapter discusses the uneven land development pattern which seems to be irreconcilably divided into the urban industrial sector and the rural farming sector. It also explains obstacles South Korean farm families continue to encounter in the process of the market opening.

Chapter V outlines the design and administration of the survey and examines if and how opinions vary by location using contingency tables and the chi-square statistic. It explores a detailed nature of the relationships between respondents' opinions and location.

Chapter VI presents a generalized pattern of the statistical relationships between opinions and key socio-economic criterion variables. This chapter introduces the method of generating opinion indices and discusses significant differences of opinions according to the respondent's location, socio-demographic characteristics, and self-reported quality of life indicator.

Chapter VII presents the findings from a content analysis of the survey data. This chapter attempts to voice South Korean farmers' concerns and to reflect their perspectives in their own words.

Finally, Chapter VIII summarizes the overall research findings and reviews their theoretical context and implications for policy-making. This final chapter also discusses the limitations of the study and concludes with the future research arena.

CHAPTER II
AGRICULTURAL TRADE AND RURAL DEVELOPMENT: A LITERATURE REVIEW

The main propositions of theories relevant to this study are reviewed in the following sections. Theories on trade and agriculture utilized in this study largely reflect a political economy perspective of the agricultural sector that stresses the underlying political factors and social implications of the economic policy-making.

2.1 The Principal Theories on International Trade

The principal theories related to international trade, which are based upon the three schools of economic thought, can be summarized as (1) neo-classical, (2) neo-Ricardian, and (3) radical economic theories (Edwards 1985). The following is each school's main position regarding international economic relations.

Neo-classical economists consider different preferences and tastes of individuals as an essential component of a free market economy. The assumption that individuals enter the market on an unbiased basis justifies the "free trade is fair trade" idea. Heckscher and Ohlin maintained that each country is different in its possession of factors of production including land, labor, capital, and management, and, as a result, produces goods with a different combination of resources (Berry et al.1997: 369). The key points argued by free market proponents are that locations of production need to be determined by cost differences based on various factor endowments and that international trade should rely upon the resulting comparative advantages (Anderson and Ahn 1984; Johnson G. 1991). Accordingly, the regional differences in costs generate conditions beneficial to trade among regions. This

theory of comparative advantage upon which the idea of free trade is founded, however, illustrates how international economic transactions would operate in a hypothetical sphere. In other words, since the theory of comparative advantage is rather a perfunctory explanation of the process of transforming resources to products, critics argue that this account is devoid of political, social, and cultural contexts. Particularly, the notion that trade equalizes factor prices among regions has been criticized mainly for not recognizing the diverse conditions and implications of economic activity on the environment, health, labor, or social welfare in locations of production (Atkinson 1998; Higgins and Savoie 1995).

By contrast, neo-Ricardian theorists maintain that comparative advantage is generated by extra-economic factors such as production conditions and wages. As a consequence, free trade can result in losses for the countries involved primarily due to devaluation of capital assets caused by the exposure to trade and price changes. Most importantly, under contemporary conditions, unequal exchange is inevitable given the rate of exploitation of labor in developing countries compared with that of developed countries (Edwards 1985: 295). To neo-Ricardian theorists, mobility of capital does not equalize factor price but actually causes unequal exchange. They go on to argue that since wage bargaining is weaker in developing countries in both primary and manufacturing sectors, institutional interventions at the national and the international levels are necessary to control income distributions (Edwards 1985: 295-300).

Another alternative perspective, the radical or Marxist tradition concentrates more on the labor process as the source of exploitation and the generation of surplus value. The source of exploitation is to be found within the functions of capitalism, and capital is a main factor to control production and the labor process. As labor values, or wages, embody the costs of production, capitalists seek higher profits. In Marxist theorists' view, the rate of profit is a determinant to induce economic transactions. As a result, "weaker blocs of capital" pursue institutional protection through tariffs and quotas from "stronger blocs" (Edwards 1985: 303). In the cases of a financial crisis or an economic recession, the demand for tariff and quota protection increases. Therefore, with the notion of the unevenness of development through space and time, capitalism is recognized as a rapidly changing phenomenon. The movements of capital do not tend to be uniform, operating for accumulation of profits. In this respect, the development of capitalism is uneven not only in developing countries but also in developed countries. This leads to the argument that the process of class struggle is limited to a national level, whereas the process of capital accumulation functions at an international level (Edwards 1985: 307). In contrast to the neo-classical theorists arguing that interregional and international trade equalizes commodity and factor prices, radical theorists regard trade as a means with which the capitalists at the center, or core, exploit the periphery (Higgins and Savoie 1995: 60). The radical theorists, reflecting the reality of development in the Third World, contend that the ultimate resolution to the conflicts between labor and capital is through socialism.

As abbreviated above, identification of tacit acceptance of these competing trade theories helps to a certain extent elucidate diverse standpoints and policies which leaderships in nation-states have adopted with regard to international economic relations. While conventional theories provide vantage points in comprehending and explaining international economic transactions, there is a rising dissatisfaction with conventional theories. The "new" theory of international trade in the vein of neo-classical economic theories, which initially emerged in the 1970s, argues that countries get involved in trade so as to take advantage of the profits accrued from specialization rather than to utilize differences in factor endowments (Berry et al. 1997: 378-380; Krugman 1990: 1-8). In other words, geographical specialization can bring profits although the countries involved have nearly equal factor endowments.

According to this "new" theory, international trade is determined by increasing returns even without comparative advantage (Krugman 1990: 3). Imperfect market competition, which is more realistic than the traditional trade theories' assumption of perfect market structure, creates conditions where transnational corporations prosper, making locations of production change across space. Labor can migrate to a wealthy region, and likewise capital can relocate to an impoverished region in order to take profits from low wage rates (Higgins and Savoie 1995: 58). Within the "new" theory of trade, historical inertia is also considered to play a significant role in determining locations of production along

with increasing returns and in magnifying the effects of geographical specialization (Berry et al. 1997: 379; Krugman 1990: 6).

In reality, it is generally accepted that the expansion of global and regional free trade agreements in the late twentieth century manifest itself as an era of market triumphalism. In this context, the question about efficiency and equity has drawn much of the debate primarily because "unregulated free trade may be more efficient, but it is not more equitable" (Blum 1994: 15). The increased geographical specialization of production enables a country to achieve high efficiency in production, yet in any condition, devising and enforcing principles pertaining to labor, welfare, and environment is a matter of dispute. Harmonizing the obligations and functions of free market forces; nation-states; and global and regional trade institutions such as the WTO, NAFTA, and APEC is seemingly a conundrum without a clear solution, but it is a formidable task imposed on each country (Atkinson 1998).

2.2 The Concept of the Global Food Regimes

In placing the South Korean case in the international context, it is useful to consider the food regime perspective and the concept of the world division of labor. Within the conceptual framework of the food regime, articulated mainly by Friedmann and McMichael (1989), domestic industrial restructuring and agrarian change are regarded as a complex, interrelated process driven by the international political economy (Buttel and Goodman 1989; Lowe et al. 1994; McMichael 1994, 1995). In a sense, agricultural trade liberalization in South Korea could be

interpreted as the working of the global regulatory mechanism on the current food regime.

The concept of a global food regime could be utilized as an empirical category (Lowe et al. 1994: 9). In general, food regime analysis focuses on the linkages between agricultural production and food consumption, which influence the restructuring of the world capitalist economy. According to Friedmann and McMichael (1989), two food regimes characterizing the different capital accumulation processes can be identified in history.

The first food regime which was formed in the late nineteenth century (the 1870s) relocated capitalist agriculture to the New World. The rapid increase of food production in the "settler states," specifically in the U.S., Argentina, and Australia, and the food exports from these regions characterized the first regime (Friedmann and McMichael 1989). The new frame of agricultural trade between nation-states replaced the traditional colonial trade in tropical agricultural products as the most important force shaping the world food system. The first food regime, however, ended during the economic crisis occurring after World War I.

Subsequently, U.S. industrial and agrarian development formed the basis of the next food regime. That is, the second mechanism for the world agro-food sector was produced chiefly by the U.S. following World War II. Price stabilization, farm household income support, and development incentives under the aegis of the New Deal offered the initiatives for the reconstruction of U.S. agriculture. In particular, U.S. food aid, which was instituted as the Public Law 480 Program, helped grain

exports to expand to the Third World countries (McMichael 1994). Essentially, this food regime was based on regulation of national economies by nation-states until the global economy encountered the energy and food crises in the early 1970s. After the crises, the national regulatory mechanism was interrupted by the rapid expansion of transnational corporations which seemingly became the organizers of global production and trade.

With the end of the era of economic regulation by nation-states, the proponents of the food regime concept maintain that a new third global food regime is being organized (Le Haron and Roche 1995; McMichael 1993, 1994, 1995). The new regime is marked by the Uruguay Round of the GATT, where the U.S. and agricultural-export countries sought to extend free trade to previously excluded agricultural markets in Europe and in East Asia (Figure 2.1).

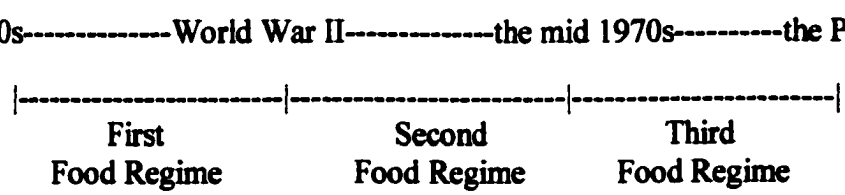

Figure 2.1 The Periods of the Global Food Regimes

McMichael (1994) argues that it may not be U.S. producers who benefit, but the transnational corporations which have helped form a new international division of labor via their global sourcing strategy. The development of transport and communications technology freely allows transnational corporations to take advantage of cheap labor overseas and promotes the globalization of production

rather than the national-based production. This division of labor is based on the export of low-value staple crops from developed countries and the export of high-value fruits, vegetables, and meat from developing countries. By subordinating producing regions to global production and consumption cycles, this system might threaten the stability of the national agricultural sectors.

Friedmann (1995) views the Uruguay Round agreements as a vehicle promoting global food trade based on durability and regulated by transnational corporations. This is in conflict with embedded regional order of food production and consumption. According to Friedmann (1995), the issues represented by this regional order are "nutrition, food safety, employment, the environment, land use, and cultural expression as political issues." The eventual outcome of the GATT negotiations would seem to be the reorganization of world agriculture under corporate privileges, where the family farms of most nations emerge as potential losers.

McMichael (1996b), as a rural sociologist, claims that the food regime is a historically comparative framework rather than a geographically comparative one as viewed by geographers. Le Heron and Roche (1995) regard the idea of the food regimes as geographical in its conceptual bases and application[2]. Its interpretation appears to rely upon which academic discipline one is affiliated with. Le Heron and Roche (1995) maintain that a third food regime can be better observed in

[2] About these critiques, McMichael state that the food regime is simply a historically grounded construct emphasizing "the political history of capitalism from the perspective of food" (McMichael 1996b: 48).

consideration of globalization and sustainability based on a geographical perspective. In this regard, critics further point out that "because a food regime takes a global perspective and neglects the cultural interpretation and articulation of economic structures within which farming takes place, it overlooks variations in the food regime experience associated with regional differences in regulation, social norms, and farming resources" (Moran et al. 1993). Different levels of resolution are involved in this dispute over the matter of a geographical study over a historical study and vice versa, but regional differences in the changing food regime are associated with local diversity and require close examinations. The historical perspective, on the other hand, helps locate the status of the current phenomena and events in the changing temporal text. In summary, the state plays the role of the negotiator between the global marketplace and the farmer, yet the concept of food regimes provides a rationalization that the external factors would be more likely to constrain the scope of the actions nation-states could take in the twenty-first century.

2.3 Government Intervention in Agriculture

Agricultural development requires a discerning balance of economic opportunities, political limitations, and technical possibilities (Timmer 1991: ix). The scale of development and the degree of poverty evidently influence the potential for government intervention and the types of responses. Generally, the roles of the state in economic development are determined by the nature of the state itself. Critics argue that state policies should be evaluated by their contribution to

growth[3] and the ability of policies to comply with the optimal balance between economic efficiency and social equity.

In the past, the apparent dual character of state intervention was seen in developed and developing countries. Export-led industrial countries with few farmers were more inclined to channel large sums to their agricultural sectors through price interventions whereas developing countries with a large proportion of farmers were more likely to tax their agricultural sectors (Lindert 1991: 29-83). The current disputes in the negotiations of multilateral trading systems, however, indicate that nation-states are now being forced to closely integrate agricultural policy with overall macro-economic and trade policies. Especially with regard to the post-Uruguay Round agricultural policies in developed countries, government intervention is shifting from price support to research and extension and the creation of rural marketing infrastructure. This context draws more attention to sources and distribution mechanisms of funding and functions of public institutions, private firms, and farm households than before.

Despite the increasing liberalization of agro-food systems, the view that agriculture is distinctive as an economic subsector is still pervasive and provides a basis for justifying the persistence of government support for agriculture. Given that it is the domestic political and socio-economic environments that can explain most of the different developmental experiences in nation-states, the future debate

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[3] There are multitudes of controversies over the term "growth," but this term is here used to indicate the improvement of the quality of life.

over the role of the government in agriculture needs to be integrated with a comprehensive political economy perspective taken in conjunction with pragmatic policy choices and with consideration of domestic political situations (Timmer 1991).

2.4 Agrarian Corporatism

In many countries, the dominant agricultural organizations such as unions and cooperatives are central to the management and representation of the farm sector (Just 1994). These institutions are usually associated with state agencies in the corporatist regulation of the farm sector. Cooperatives generally benefit from legal prerogatives, financial support, and the exercise of political authority. The political power and functional specialization of cooperatives direct the economic management of agriculture. In general, cooperatives play an important part interceding between farmers and the market. Broadly, they connect agricultural production to the purchasing, sale, and processing levels, thus establishing an often regionally-based vertical and horizontal integration (Lowe et al. 1994: 19). In fact, these features have characterized farming unions in southern European countries and national cooperatives in Japan and South Korea (Kim C. 1993).

One useful insight which can be gained from the analyses of agrarian corporatism is that in most empirical cases, an augmentation of national agricultural production guided by corporatist organizations surpasses the threshold of domestic markets to absorb the surplus of farm production. This overproduction problem is not usually solved within the conservative and bureaucratic nature of

agricultural institutions. It is believed that the rigid and autocratic character of state agencies and agricultural organizations such as cooperatives and unions are both implicit and explicit causes of the destabilization of the farming sector. The interdependencies between government agencies and farm organizations imply that structures of agrarian corporatism are highly resistant to changes.

In South Korea, the internal complex linkage between producers and the state has been facilitated by agricultural corporatism, which also reveals its inflexible nature with respect to adapting to external changes. Economic liberalization and political reforms in recent years have put forth a new social environment which the South Korean national cooperative federations should reorganize[4] and adjust to. With reduced government regulations, therefore, the demand for the public roles of agricultural institutions is expected to increase in enhancing rural social welfare and mediating between market forces and farm households.

2.5 The Transformation of Farm Households: Commercialization versus Commoditization

The transition of rural communities from subsistence farming to commercial farming has long been discussed in various fields of study of rural

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[4] In March 1999, after arresting 147 officials of various cooperative federations for allegedly taking bribes and embezzling funds, the Korean government announced its plan to merge the National Agricultural (NACF), Livestock (NLCF), Forestry (NFCF) and Ginseng (NGCF) Cooperatives Federations. The plan is a part of restructuring programs to reduce employees and to economize the organizations. Irregularities and corruption of officials induced mistrusts from farmers and fishermen in the past. Critics, however, point out the inherent problems related to the forced merge and potential government intervention in rural programs (Digital

communities. As Vandergeest (1988) states, disparate theoretical approaches to rural development could be identified as the commercialization school, which is largely based on neo-classical economic theories, and the commoditization school, which draws from the neo-Marxist standpoint. Critics have claimed that both schools are deceiving and that both distort reality without delineating history accurately. Further, neither perspective escapes from deterministic and unilinear accounts of rural change (Vandergeest 1988; Long et al. 1988). Accordingly, integrating the two perspectives is considered to be an important research field which needs both empirical studies and theoretical elaboration. The progress and operation of forces of agrarian transformation are obviously affecting each farm household, region, and country to a different degree and in a different manner. Reviewing the debates over rural development would help describe the recent changes in agriculture in general. In this section, the commercialization and commoditization perspectives are examined to help obtain a better outlook over the process of changes in rural places, particularly following Vandergeest's study (1988).

2.5.1 Commercialization of Agriculture

According to Vandergeest (1988), a negative characterization of subsistence farming communities or peasants and a positive characterization of modernization form the major track of the commercialization of agriculture perspective. Introducing the market forces is viewed as a solution to dissolve a reactive,

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Chosun Ilbo, March 10, 1999; Korea Times, April 2 and 4, 1999).

unproductive, traditional agriculture and simultaneously to transform it into an efficient, rational, commercial agriculture.

Even though sociologists and economists utilize different presumptions and explanations of commercialization as their conceptual framework, production for market is a common ground for peasant or subsistence farming societies to be able to proceed in an evolutionary path. According to sociologists, "prejudicial and essentialistic" views of traditional peasant culture (Vandergeest 1988: 9) justify the dismantling of a "moral economy" of subsistence farming to make it receptive to innovation. By comparison, from economists' view, since peasants are looked upon as rational allocators of economic factors as applied to any other economic agents, appropriate government policies, research and development are needed to help subsistence farmers transform into commercial farmers by themselves. In other words, research and development produce the applicable technologies, industrial developments provide the inputs, and education and extension give peasants or subsistence farming communities the capability to use the new inputs (Vandergeest 1988: 12).

In accordance with this perspective, inert cultural characteristics and individual attitudes are considered as the obstacle to the rational development of agriculture. It is assumed that as initiators start to adopt new technologies and produce for the market, peasants would want the benefits of commercial production, thereby changing into commercial farmers.

In short, this school views that the introduction of market forces would commercialize peasants, dispel rural poverty, and increase rural income level. Vandergeest (1988: 12-13) points out that this modernization theory has widely been implemented by government agencies as technical guides for extension workers. Although the commercialization school recognizes both its theoretical and practical weaknesses for the persistence of rural poverty, it has enticed much more strengthened research efforts and funding. It is expected that the commercialization theory will be more intensively applied by state agencies to promote the interests of the state and international capitalists. The globalization process of agriculture and trade liberalization by nation-states will also accelerate the commercialization of farm households.

2.5.2 Commoditization of Production

It has been recognized that rural destitution is persistent despite the long-term modernization efforts by the Third World countries. The commoditization of agriculture school maintains that imperialism, colonialism, and capitalism are working in tandem and are responsible for the vicious cycle of rural poverty and the inadequate development of the factors of production. In fact, the commoditization of agriculture school stems from the neo-Marxist criticisms of modernization theory (Vandergeest 1988: 13). The destruction of a peasant "moral or natural economy" occurs through the process of commoditization. In other words,

> commoditization is a process leading to impoverishment, loss of control over the means of production and new institutions of surplus extraction. It is

> a process peasants are expected to resist. When farm households are already partially dependent on goods obtained in the market to satisfy subsistence needs and obtain the factors of production, they must produce commodities to obtain money to purchase such goods (Vandergeest 1988: 16).

However, within the school, there are the debates over the non-commodified activities and forms representing the continuance of the subsistence farming. According to the neo-Marxist critiques, the subsumption of the peasantry under capital in the absence of direct acquisition by capitals can occur. The main reason is that "subsistence commodities" are considered to have not an exchangeable value but an abstract value, which is best realized by the subsistence farmers themselves (Long et al. 1988: 35). In this regard, "exchange calculations" condition subsistence farming. Concerning this economic decision making by economic calculations, critics claim that cultural and social values to hold onto land were plainly dismissed (Long et al. 1988: 35). For instance, it can be argued that a patrimonial tradition of land inheritance has more effects on the farmers' decision not to sell the land. It is even understood as the farmer's "fear of becoming proletariarized" or "their commitment to a way of life" (Friedmann 1986 cited from Long et al. 1988). As such, the arguments of economic determination call for the criticism of the commoditization school's reductionism and its inability to explain the existent problems (Figure 2.2).

It is noteworthy that commoditization of households occurs within a context of high mobility of land, labor, and credit, whereas resistance to commoditization depends upon immobility of the inputs to the production activities (Friedmann 1980: 160-165). The repression on peasants, imposed by capitalist production

Commercialization of Agriculture	*Commoditization of Farm Households*
"Traditional" Subsistence Agriculture	"Traditional" Subsistence Agriculture
<Barriers of Modernization> Cultural Characteristics (e.g. Familism, Lack of Innovativeness & Fatalism)	<Cause of Poverty> Imperialism, Colonialism, Capitalism, & Dependence on the Center (i.e. Destruction of a Peasant Natural economy)
<Solution> Modernization & Introduction of Market Relations	<Solution> Development of the Forces of Production or Socialism
<Critiques> Persistence of Poverty	<Critiques> Debate over Non-Commodified Forms & Lack of Practice

Figure 2.2 Commercialization of Agriculture and Commoditization of Farm Households
Source: Based on Vandergeest (1988)

relations, results in the disappearance of the peasantry as a distinct form of production, which is called "social differentiation." (Friedmann 1980: 164-165). As a natural consequence of this process, peasant or subsistence farming communities inevitably disintegrate into the two social classes of capitalist farmers and rural wage laborers. The factors which are operating in the process are

> the institution of private property in land, the differential adoption of improved cultivation practices by different individual farmers, the enforced abandonment of their holdings by peasants unable to compete in the market with their more advanced neighbors, the foreclosure by creditors on farmers who have run into debt, and the increasing employment of wage labor by those farmers who are successful (Ellis 1988: 50).

For many developmentalists, this is considered not only as an objective process but also as a strategic necessity. In other words, it is often argued that the disintegration is a requisite mechanism in order for the agricultural sector to make a contribution to economic growth.

Nevertheless, peasants or subsistence farm families resist the pressure from capitalist production relations. The factors of this resistance are regarded to be inherent in family farm production. It is argued that the simple reproduction rather than profit maximization as the goal of peasant households is a rationale behind the perpetuation of peasant society. Further, the reasons for the persistence of peasant society are ascribed to the logic of capitalism. A paucity of capital accumulation is a predestined consequence of the restricted material motivation of peasants. Thus, capitalist production relations push peasants towards simple reproduction. As a result of the appropriation of any surplus of peasant production by the larger

system, the peasantry perpetually remains at the level of simple reproduction. One of the main causes for this simple reproduction stems from social devaluation of peasant labor time. Innovational factors including technical improvements intrinsic in the structure of capitalist society result in the decrease of the price of commodities and make peasants use more labor to sustain the same level of income. The increasing costs of production and decreasing returns to labor are termed as "a simple reproduction squeeze" by Berstein (1979: 427).

Another explanation for the persistence of peasants is that certain factors which adversely affect "the rate of profit, the efficient use of constant and variable capital, and the functioning of the circulation and realization process" inhibit the advance of capitalism in agriculture (Mann and Dickinson 1978: 466). The difference of production time and labor time (Mann and Dickinson 1978: 471) or the seasonal patterns of labor use (Ellis 1988: 52) are viewed as those elements. Mann and Dickinson contend that

> the agricultural commodities which need an excess of production time over labor time necessitate the inefficient use of constant capital, labor recruitment problems, a lower rate of profit, and complications in the realization of value in the sphere of circulation (Mann and Dickinson 1978: 478).

For capitalist production, these factors pose a problem for permanent wage labor, making certain fields of agricultural production unattractive.

However, surplus, or "the proportion of the social value produced by peasant labor above the simple reproduction needs of the peasant household" is bound to be exploited by capital (Ellis 1988: 53). In other words, surplus

appropriation occurs as the part of the total product of peasant labor is captured by other groups or classes in the broader society. There are seven mechanisms of this surplus appropriation identified by Deere and de Janvry (1979: 607-608): rent in labor services, rent in kind, rent in cash, appropriation of surplus value via wage, appropriation via prices, appropriation via usury, and peasant taxation. While some of them could be considered as ordinary payments for the factors of production, some include non-capitalist social relations between peasants and others. However, it should also be noted that much of the supposed exploitation of peasants corresponds to the normal function of the capitalism in which the survival of the fittest is a principle.

From the classical Marxist perspective, the state is a legal and institutional apparatus to enforce private property rights and legal contracts and to supply public goods and services. However, mostly in the Third World, a powerful central state extracts most support and authority from the more advanced sectors of the economy. This mechanism does not effectively represent a nation's rural population. In a rather excessive case where the development of capitalist production relations is disproportionate, the state may not have the economic basis which is viable unless it distills large surpluses from its peasant population. The possible adverse functioning of the state involves modifying the legal basis of tenure for large-scale production, producing marketing conditions favoring certain customers, or playing an intermediary role between external corporations and

peasants. It is commonly observed that the state overrides or substitutes for market forces in many nations.

Vandergeest (1988: 22) claims that the commoditization theories rarely deal with "transformation in the political dimension and cultural dimension of class, community and kinship relations," which is one of the most obvious weaknesses of the school. In addition to those critiques previously identified, Vandergeest (1988: 21) indicates that the relations of peasants with the natural environment as aspects of the process of commoditization need more attention. Although Vandergeest's review (1988) is limited to the fields of rural sociology, peasant economics, and economic anthropology, the relationships between the environment and the commoditization process have also received increased attention from political ecologists. It has been recognized that a spatial or regional dimension needs to be treated in relation to stages of agrarian transformation, uneven development, and regional characteristics (Buttel et al. 1990: 174).

In summary, the commoditization theories help locate the farm household production within the context of the wider social processes despite their shortcomings. They focus on social coercion on individual action and conflicts in the relations between different classes in a wider society. Apparently, traditional subsistence farming or peasant household production is not a mode of production itself, but it is situated within a dominant mode of production of a society (Ellis 1988). With respect to the survival of family farms and peasants, contradictory forces are operating, which either contribute to its disintegration or to its

perpetuation. The surplus appropriation of peasant production by other social groups is an inevitable consequence according to the classical Marxist perspective. It should be recognized that the different social contexts lead to regional difference of the adaptive strategy and the viability of traditional peasant households. In this respect, the commoditization theories can be a useful complement to neoclassical preoccupation with individual economic decision making.

2.6 Issues of Regional Planning: Top-Down versus Bottom-Up Development

Regional development is a broad umbrella concept that covers outwardly diverse but inwardly adjoined elements of "economic growth, cultural development, ecological balance, and structural transformation" (Stohr and Taylor 1981: 123). At the heart of debate about regional policy and rural development agendas in developing countries has been the issue of centralization versus decentralization, or convergence versus divergence. The pros and cons of both the top-down and the bottom-up regional development approaches should be evaluated in terms of broader systematic problems facing nation-states in their development.

First, the basic hypothesis of development initiated from above is that growth is driven by external demand and that development should concentrate on a few dynamic sectors in the core growth centers, or dominant cities. The generated wealth, in turn, is believed to spread or filter down to the remaining population and hinterlands. In other words, economic dualism and growth pole strategies are considered to generate the mechanism for making the economy continue to grow. In relation to agrarian and rural development, the center-down approach supposes

that surplus agricultural labor could be absorbed by the industrial sector without loss of agricultural productivity while making the industrial sector more productive. As profits are reinvested, more capital is created, leading to more growth, more income, and more employment. This is the process of growth of income that eventually trickles down to all segments of the economy (Hansen 1981).

As Hansen describes, however, appraisals of the center-down paradigm have already experienced three phases from "(1) *optimism* with respect to possibilities for inducing growth in a few centers and to the subsequent generation of spread effects, (2) *pessimism* when the expectations of the early phase failed to materialize, and (3) *a broader view* of growth centers as one aspect of more comprehensive development planning" (Hansen 1981: 34, Italics Added). Indeed, the top-down development theories have fully evolved to recognize their fallacies and discrepancies from the reality, but emerging problems of the growth-pole regional and economic development policies particularly in developing countries are still taking political and social tolls and have called for a new resolution to the drawbacks.

By contrast, theories based on development from "below" imply instituting diversity with the government and decision-making and a high degree of self-determination with the poor. This approach is to help peripheral or less developed areas not only to gain support from urban centers as hinterlands but also to allow individuals to develop their own strategies by utilizing local resources in an appropriate manner. As Stohr (1981: 6) describes it, one of the major concerns for

planners in developing countries today is to combine the ways to integrate elements of the bottom-up development approach with the preceding center-down developmental pattern. How efficiently the elements of the bottom-up development strategies are applied to the reality is dependent largely upon the degree of utilizing various resources of a geographical unit. With respect to rural areas, developing market, transportation, and business services is considered as a critical element in improving regional incomes and welfare.

Likewise, a region's relationships with the national pivot areas stipulate the conditions of urban-rural development. It is necessary to situate the region in question within the specific spatial, social, economic, and cultural contexts of each nation. The different regional types such as the regions of "metropolitan dominance, urban shadow, mixed rural-urban regions, or rural dominance" need to be related to each different condition and structure of demographics, economy, and culture (Lo and Salih 1981: 144-146).

In the pre-Uruguay Round era, as a solution to reduce urban-rural regional disparities, regional planners recommended "national pricing policies which offer terms of trade more favorable to agricultural and other typically peripheral products" (Stohr 1981: 66). Clearly, however, this is no longer applicable in view of the rules and regulations endorsed by the member nations of the GATT and the WTO. This is an example demonstrating how closely regional development programs are related to the different socio-economic conditions in each nation-state and its relationship to the world economic system.

The current trend in the world economy shows that regional planning is largely constrained by a nation's macro-economic conditions and the dictum of the supranational organizations. Sustainable regional and economic development will not occur in any national setting without some combination of development from below as well as from above.

2.7 Representations of Rurality: Globalization, Cultural Politics, and Rural Protests

2.7.1 Globalization and the Locality

Numerous definitions of globalization broadly imply a world integration while overcoming the spatial restraints on social and economic transactions (Lie 1996: 585). According to Lie's abbreviation, "globalization... is a concatenation of disparate meanings and evokes *inter alia* the power of transnational corporations and the integration of international finance, the diffusion of technological innovations..., and the emergence of homogenous commodity culture around the world" (Lie 1996: 585). Arguably, globalization on a large scale is an integrating, homogenizing process in the social, economic, and cultural dimensions, which is principally predicated upon technological innovations. In human geography, time-space compression is used to depict processes of globalization. Massey (1991) points out that this time-space compression is not universal to all residents in this global village. The degree and extent of globalization in commodity culture, international finance, technological advances, and any other socio-economic and cultural sectors are apparently disparate from place to place.

As international capital, in which money capital was separated from productive capital (McMichael 1996b), has become more flexible and mobile, the contradictory, self-destructive nature of capital is evidenced in the Asian and Latin American financial crises. In the 1999 World Economic Forum, some countries, after the bitter experiences of the instability of the financial sectors in the late 1990s, suggested that there should be a certain mechanism of control over capital transactions[5]. This interventionist approach towards globalization in the financial sector seeking reciprocal capitalism has undoubtedly been confronted with the opposition by advocates of market liberalism. To proponents of *laissez faire*, this consensus in the Third World is against the ideology of globalization and the interests of a circle of global elites including international financiers, corporate executives, and regulators (McMichael 1996b). Globalization, viewed from a process of financial integration, is presently functioning like a self-fulfilling prophecy.

The expansion of the supranational organizations is most notable in relation to market liberalism and specifically to agricultural trade liberalization. The increased governance of the international organizations is represented by the Bretton Woods System including the International Monetary Fund (IMF), the

[5] Leaders from Europe, Asia, the Middle East, and Canada emphasized stronger controls over capital movement at the World Economic Forum (WEF) held in Davos, Switzerland in 1999. Notably, Bundesbank President Hans Tietmeyer made a suggestion of creating a supervising panel of national bank, insurance, and securities markets as well as financial regulators from the IMF and the World Bank (Korea Times, February 5, 1999).

World Bank, and the GATT which was replaced by the WTO. As described earlier, the global institutions' regulation of the international agro-food sector characterizes the new global food order, or an incipient third food regime. Globalization in food and agriculture is conceived mainly as the vertical integration of the world agro-food system by transnational corporations from the U.S., Japan, and Europe[6]. McMichael describes that

> by 1994, agro-exports from the U.S. accounted for 36 percent of wheat trade worldwide; 64 percent of the corn, barley, sorghum, and oats; 40 percent of the soybeans; 17 percent of the rice; and 33 percent of the cotton. However, these trade challenges have not so much rewarded the United States (and other food exporting nations) as they have strengthened the grip of the food companies, which benefit from the free trade movement - for example, 50 percent of U.S. grain exports in 1994 were shared by two companies: Cargill and Continental (McMichael 1998: 114-115).

Globalization of agriculture including trade liberalization has benefitted some countries, rather correctly transnational corporations in some countries, while capitalizing on others. It is still required to carefully assess how empirically the agricultural and food industries are being structured and empowered through analyzing them case by case. However, what is clear is that all over the world, agriculture is being restructured in concert with international economic integration led by the IMF, the World Bank, and the WTO.

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[6] The following are some of the major transnational corporations in the food industry: Bird's Eye, Green Giant, Coca-Cola, Pepsico, General Foods, Kellogg's, Campbell's, Kraft, Philip Morris, ConAgra and Del Monte in general food processing and manufacturing; Cargill, Archer Daniels Midland, Continental, and Luis Dreyfuss in grain trading; and Monsanto, Novartis, AgroEvo, Dupont, Zeneca, and Dow in genetic engineering of food from the United States. From Japan are Mitsui, Mitsubishi, C. Itoh, and Sumitomo; and from Europe are Unilever, Nestle, Feruzzi, and Montedison (McMichael 1998).

This trend of the supranational institutions' subsumption of the nationally oriented institutions also involves the embodiment of the local diversity. With progressing globalism, local communities either promote the locality in a global market or resist the globalization process (McMichael 1996b: 25). The diverse local cultures and geographies give different faces and voices to globalization. Alternately, shedding new light on the culture of rurality is inherently connected to each locality.

Most studies indicate that not only in theory but also in reality, rurality has occupied a marginalized position (Marsden et al. 1993). Such terms as "otherness," "marginalization," "a residual status," and "exclusivity" are used to describe agriculture and rural lives. These terms alternately reinforce the images of rurality. Particularly, cultural marginalization is considered to be critical within a wider context to spell out the problem of living in rural areas. One of the critiques of the political economic and neo-classical studies on rurality is based on an economic generalization and homogenization of the countryside[7].

As Cloke and Milbourne (1992: 359) argue, why certain structured opportunities may be experienced differently by individuals and households is related to the cultural dimension. The next section, thus, discusses how rural problems are related to culture and rural activism.

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[7] For instance, Crouch states that "the rural is treated as a market surface where decisions on change can be reduce to consumer decisions, consumer sovereignty and individual markets" (1992: 231).

2.7.2 The Cultural Dimension of Rurality and Rural Protests

The construction of rurality is intertwined with the cultural domain. In the study of two Welsh communities, Cloke and Davies (1992) point to the importance of the cultural dimension in looking into rural deprivation. Cloke and Milbourne (1992: 363) state that the interrelation between identity and political economy in a regional context can be examined through the narratives of individuals about the region where they reside. The notable feature in the local practices of culture is that

> the cultural characteristics of regions figure significantly in the social consciousness and relations of groups of people in particular places (Cloke and Milbourne 1992: 363)....Different representations can emerge and indeed differences in social networks, cultural attitudes and landscape preferences can produce attendant geographies within a particular place (Cloke and Milbourne 1992: 364).

As mentioned above, the fabrics of different regional cultures bring about a unique catalytic reaction in the cultural representations of rurality and socially structured experiences. Via the ongoing processes of negotiation, reflection, and rejection, the local people build the features of rurality itself and its related social, cultural composition (Cloke and Melbourne 1992: 364). Different social groups, often based upon regional affiliation, draw upon different meanings from their collective memory. Hence, certain meanings of culture are internalized and practiced through local cultural making.

Especially pertaining to the cultural dimensions of rurality and deprivation in the South Korean case, the culture of rural protests needs to be interjected because regionalism, or regional sectarianism, has characterized political conflicts and has preceded any other social cleavage. Korean history discloses that

regionalism and political conflict are conjoined together. Regionalism in Korea is, in a narrow sense, provincial divisions and antagonism between the southwest region called *Honam* and the southeast region called *Youngnam*. Since the survey samples in this study cover the two provinces from the southwest and the southeast, the roles of regionalism could provide helpful insights in understanding how the respondents interpret their situation. This is further dealt with later, and here conceptual bases are discussed.

Ross (1993), in his cross-cultural analysis of conflict, argues that both structural and psycho-cultural factors contribute to conflict[8]. He calls the ways a society's institutions, practices, and norms produce a pattern of conflict "the culture of conflict" (Ross 1993: 21). Conflicts as collective actions are, in some cases, influenced by regional cultural contexts, since the ways community institutions react to certain events and processes are influenced by cultural interpretations.

Agrarian to non-agrarian conflicts often develop into agrarian protests which are triggered by temporally and spatially isolated instances. Public mobilization and outcry are driven by the poor in their struggle for survival and equity. Socio-political protest and change bring about complicated effects and processes of cultural values, social structures, and individual behaviors. The individual's participation in protest movements is considered to be determined by

[8] Explanations based on psycho-cultural disposition deal with conflicts in relation to intrinsic motives for behavior which has foundations on cultural factors such as common ideas and perceptions of the outside domain. In contrast, social structural conflict theory rather focuses on forces driving a society to become involved in conflicts (Ross 1993).

his/her attitudes about social reality. In other words, as much as political activity is an embodiment of cognition, rural social activism is an expression of an individual's perception. To identify rural problems, thus, researchers need to comprehend how people perceive their surroundings. Measuring the quality of life, or the standard of living, begins with measuring how rural people perceive their surroundings in the region in which they live.

2.7.3 Subjective Well-Being and Regional Development

Social scientists have used the term "social indicators" to measure and show socio-economic well-being or broadly the quality of life in a concrete way. This has been part of researchers' and planners' efforts to provide information for policy-making process, especially in regional development. Social indicators are classified into two categories: objective and subjective indicators. This is based on the idea that "aspects of a person's life relate to its quality derived from sources external to the person, and those derived from a person's own perceptions of what is important to, and the level of, his quality of life" (Carley 1980: 34). Objective indicators consist of the counts of the occurrences of a specific event, and in general, demographic data are processed to assess objective standing. In comparison, subjective indicators are generated from individuals' reports on how they perceive or how satisfied they are with various aspects of their lives[9]. Therefore, subjective

[9] Researchers make use of diverse categories, and government statistics cover different topics. For example, in Great Britain, the government annually publishes "Social Trends" in order to assist policy-making. The general topics included are population, households and families, social groups, education,

conditions are measured by interviews and questionnaires composed of rating scales, designed to gauge a relative intensity of respondents' perceptions and feelings (Carley 1980: 31-35).

Some research shows that objective conditions of life are not on a par with subjective evaluations. Sirgy (1988) argues that quality of life is partly determined by satisfaction with standard of living, which in turn is mostly determined by evaluations of one's actual standard of living compared to a one's established goal. A person's goal of standard of living is mostly determined by "affective-based wealth expectations and cognitive-based expectations" (Sirgy 1998: 228). Since quality of life is a function of the satisfaction felt by individuals, materialism affects one's subjective evaluation of life. One of the important applications of social-indicators research is to identify regional problems and disparities and to reflect findings in policy-making processes. Planning agencies and governments, for instance, should be able to locate those areas undergoing unemployment and poverty and remedy regional disparities.

Critics contend that aggregated data cause their users to commit an ecological fallacy by hiding information vital to the decision process. Neither objective nor subjective indicators have managed to give us an accurate portrayal of reality when used alone. In order to represent the rural problems, it is important to examine how deprived the rural people are and how quality of life can be

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employment, income and wealth, resource and expenditure, health and public safety, housing, environment and transport communication, leisure, participation, and law enforcement (Carley 1980: 114-115).

measured. Both objective and subjective indicators, when used in conjunction, provide a more accurate portrayal of reality (Carley 1980).

2.8 Summary

Theories on trade, the global food regimes, government intervention on agriculture, agricultural corporatism, agrarian transformation, representations of rurality are intertwined together. Every element in these theoretical aspects influences one another. The deductive theories of agrarian space are useful in a sense that they provide us with a vantage ground in a broad range of inquiries. It is obvious that deductive theories of agrarian structure have their own limitations, incapable of resolving all empirical problems and cases. Abstract deductive arguments are not capable of explaining all variations across time and space (Buttel et al. 1990: 172). The problems of verification or correctness of theories easily appear in the facade. Although inductive inference derived from explaining practical cases often rejects the presumptions of deductive theories, it is necessary to identify patterns or general, common threads in unraveling complexities of various phenomena and events. The theories discussed here provide the conceptual bases of this research and are tested and discussed in connection with the Korean case in the later chapters.

CHAPTER III
NEGOTIATIONS ON AGRICULTURE IN THE URUGUAY ROUND OF THE GATT

National principles of economic organization shielded under controlled agricultural sectors in industrial countries are being challenged to transform in conjunction with the far-reaching modifications of the global economy. One major force affecting the current spatial, political, and economic configuration of capitalism is the GATT/WTO system and other supranational organizations. Sociologists view trade liberalization as a shift from national ideals and beliefs guarded by instituted protectionism to global restructuring of resources and free trade (McMichael 1994, 1995). In the past, agricultural producers in export-oriented industrial countries have primarily relied upon a national farm policy of protectionism for the survival of the sector. Indeed, most of these nations have resisted agricultural trade liberalization which would force them to compete in the global market without any comparative advantage.

Given the presumption that recent changes in the structure of world agricultural production pose a potential threat to the future of local family farming, it is indispensable to explore the wider context of the current situation. It is postulated here that the degree to which the nation-state should emphasize production for export vis-a-vis production for domestic consumption or production for subsistence living is increasingly dependent upon the dynamics of the changing nature of the global political economy of agriculture.

This chapter examines the historical process through which the multilateral trading regime evolved from the GATT to the WTO and the roles and functions the world trading system has played in international interdependence. The major negotiating groups' perspectives on agriculture in the Uruguay Round are also reviewed. This chapter will help obtain a broad perspective on the principal roles of the agricultural negotiations in the Uruguay Round by placing the diverse standpoints and policies, which the U.S., the E.U., the Cairns Group, and the East Asian countries opted for, on a continuum for the purpose of direct comparison. The differing objectives of the participants and the compromises which were finally accepted are explored in light of their efforts to maintain national agricultural policy sovereignty.

3.1 The Historical Development of the Contemporary Global Trade Environment

3.1.1 A Historical Development of the Multilateral Trading System

The role of the GATT has been to reduce barriers of trade and to improve conditions of market access for all contracting parties. The GATT came into existence from the negotiations to establish an International Trade Organization (ITO) after the Second World War. The negotiations on the treaty of such an organization, although completed with success in Havana in 1948, did not lead to the institutionalization of the ITO partly because the U.S. Congress declined to approve the agreement (Hoekman and Kostecki 1995: 13).

While created as an interim organization in response to the earlier failure, the GATT incorporated most of the specific provisions of the ITO. In this respect,

the GATT was formally not a legal entity but more accurately an inter-governmental charter. During the five decades of its existence, however, the GATT system fully evolved into a quasi-universal trade organization. Starting in the 1940s, recurring rounds of multilateral trade negotiations were held to enlarge the extent of the GATT to non-tariff policies.

For the past five decades, a total of eight rounds of multilateral trade negotiations were held under the GATT auspices: the Geneva Round (1947), the Annecy Round (1949), the Torquay Round (1951), the Geneva Round (1956), the Dillon Round (1960-1), the Kennedy Round (1964-1967), the Tokyo Round (1973-1979), and the Uruguay Round (1986-1994) (Hoekman and Kostecki 1995: 12-17). In the first five rounds, the major agenda dealt exclusively with tariffs. Negotiators were committed to tariff reductions for manufactured goods. From the Kennedy Round, the focus was on non-tariff trade barriers and a broad range of issues related to an increasingly extensive number of products. Whereas the Kennedy Round dealt with non-tariff restrictions on products which were already included by the GATT, the Tokyo Round extended its agenda to those policies that were not previously subject to GATT directives (Ingersent et al. 1994: 10-11).

This trend towards greater inclusiveness amidst efforts to regulate more strategies and more commodities continued in the Uruguay Round. In this Round, major emphases were placed on trades in services, intellectual property rights, and agriculture, and regulations formally establishing rules of origin. Moreover, the Uruguay Round, as one of its chief achievements, led the creation of the World

Trade Organization. The WTO was established in 1995 to administer and enforce multilateral agreements pertaining to the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS), and the Trade-Related Intellectual Property Rights (TRIPs) (Hoekman and Kostecki 1995: 12).

In the period leading up to the establishment of the WTO, the GATT was already playing a role of a legitimate world trade organization with 128 signatories as of 1995 and another twenty potential members. With the exception of the nations of the former Soviet Union, China, and Taiwan which currently are engaged in accession negotiations, all major trading nations are currently WTO members (Hoekman and Kostecki 1995: 20). The WTO is literally a supranational organization in the sense that it governs the regulatory conduct of governments. Through multilateral trade negotiations, thus, countries exchange market-access commitments on a reciprocal basis (Hoekman and Kostecki 1995: 23).

3.1.2 Agriculture in the Uruguay Round: Agenda and Outcomes

The Uruguay Round led to a further liberalization of international trade, including not only tariff reductions but also the reintegration of agricultural trade and textiles into the GATT and the extension of GATT directives to these products. In this Round, separate negotiating groups on (1) natural resource based products, (2) tropical products, (3) textiles and clothing, and (4) agriculture focused on trade restrictions related to each sector (Ingersent et al. 1994: 17). While all parts of the agreements covering each and every agendum have far reaching implications, the formal international control over agriculture was most remarkable.

Unlike trade in industrial products, agricultural production and trade over the past three decades were characterized by overproduction and domestic policies that generally attempted to avoid adjustment to changing world market conditions. While trade in agricultural goods amounted to about thirteen percent of the total trade in goods in the early 1990s (Ingersent et al. 1994: 17), most industrialized countries still protected their agricultural sectors for a multitude of reasons related to food security, regional politics, and the overall social welfare of rural populations. In the late 1980s, the increased use of export subsidies and declining commodity prices heightened international tensions associated with trade in farm products. These conflicts represented the primary motivation to include agricultural trade into the Uruguay Round. The talks lasted more than seven years in part because of the contentious nature of agricultural reform in domestic political arenas.

Owing to the institutionalized nature of farm supports and the complexity represented by the various interests involved even within each nation, agriculture in prior rounds was considered being too problematic to be adjusted by international agreement. In fact, agriculture was an area where reciprocity was discontinued as a mechanism for liberalization. This was caused partly by the E.U. and East Asian countries' institutionalized protectionism, which was designed to satisfy farmers on one hand and to appease domestic interest-groups in manufacturing industries on the other.

For those export-oriented industrial countries, potential export interests which would be acquired from the Uruguay Round were not agricultural but industrial. Those industrialized countries would get more profit in their industrial sectors from enhanced access to international markets. The Common Agricultural Policy (CAP) of the E.U., for instance, provided for support prices at which the Union guaranteed to purchase the agricultural products from farmers and a threshold price below which no imports were allowed (Hoekman and Kostecki 1995: 196-197).

A similar situation applied to the U.S. and the East Asian countries. In Japan and South Korea, governments promoted free trade of manufactured goods to satisfy the industrial sector, while protecting agricultural markets as much as diplomatically possible to assure some absolute level of income for farmers and some measure of rural-urban equity (Moore R. 1993: 281). In many industrialized nations, market economy mechanisms were controlled by production quotas, government purchasing and distribution, and administered pricing (Hoekman and Kostecki 1995: 197). Certainly, for all of the major nations with significant agricultural exports, the sector remained heavily subsidized and under far greater government control than any other sector of the economy.

The E.U. emphasized sovereignty and self-management, while the U.S. emphasized the free market from the early stages in the Uruguay Round. The Japanese government maintained a position supporting more gradual liberalization than was acceptable to U.S. negotiators. Despite a wide range of disparate

perspectives represented by these positions, the Uruguay Round clearly reflected the consensus of major trading nations that domestic agricultural policy could no longer be withheld from international negotiations.

The major agricultural issues discussed in the Uruguay Round are divided into three areas: market access, export competition, and domestic support (Josling et al. 1996: 175-216). First, to improve market access in agriculture, the Uruguay Round agreement required the conversion of all non-tariff measures into bound tariffs. As a result, nation-states will no longer be allowed to use non-tariff measures, such as quotas, embargoes, size restrictions, sanitary controls, labeling restrictions, or standardization criteria for the protection of domestic agricultural markets. This conversion of non-tariff measures is considered critical to the agreement in that the WTO can only eliminate trade barriers if some common standard of tariffs can be established.

With regard to export competition, the agreement provision stipulates that "each member should undertake not to provide export subsidies otherwise than in conformity with this Agreement..." (GATT Article 3 (3) in Josling et al. 1996: 195). More specifically, existing export subsidies are required to decrease by 36 percent in value terms for developed countries and 24 percent for developing countries. Further, after full implementation, the volume of subsidized exports should be reduced by 21 percent from a base period average level calculated as the mean level of subsidy for each particular product from the years from 1986 to 1990.

Finally, all domestic forms of production support for all signatory nations as measured in aggregate should be reduced by 20 percent by the year 2000. The Aggregate Measures of Support (AMS) include all support policies affecting trade, including market price-support policies and any and all expenditures on domestic subsidies. For developing countries, domestic support must be reduced by 13.3 percent from 1995 to 2004 (Hoekman and Kostecki 1995: 205).

3.2 Agricultural Negotiations in the Uruguay Round

This section provides an overview of the policies followed by several major trading countries and the rationale behind these policies. Examining the progression of the agricultural negotiations in the Uruguay Round could be reduced and clarified by limiting attention to the standpoints of major players even though more than 100 contracting parties to the GATT participated in the round. In this section, the different perspectives of the U.S., the E.U., the Cairns Group, and the East Asian Countries are outlined.

3.2.1 The United States

Although the apparent benefits of domestic agricultural protection offered a conflict of interests to the U.S. government in the negotiations, the potential to reverse its declining share of global agricultural trade made the U.S. adopt "the zero option" arguing for the complete liberalization of agricultural trades (Ingersent et al. 1994). The U.S.'s ideological position to completely eliminate all types of trade-distorting protective measures, however, faced the implacable opposition of the E.U. and Japan.

As the world's greatest "breadbasket" (Moore, R. 1993: 254), the U.S. pursued a dual agricultural trade policy. The U.S. farm sector was characterized by free trade in grains which had a comparative advantage on one hand and protectionism in dairy, sugar, and tobacco on the other. Further, the intention to abandon the public commitments for costly farm price and income support policies was also one of the major reasons to drive the U.S. to adamantly contend the complete liberalization of agricultural trade. Despite the ever increasing pressures from domestic interest groups, however, the U.S. had to accommodate the E.U.'s propositions to some extent, giving up the zero option at the end of the negotiations for the successful conclusion of the Uruguay Round.

3.2.2 The European Union

The E.U.'s position on agriculture in the Uruguay Round was essentially defensive in response to the idealistic position of free trade adopted by the U.S. The Common Agricultural Policy (CAP) of the E.U. was critical in maintaining high domestic price supports, protecting its domestic markets, and safeguarding its agricultural export market share. From the beginning, the E.U. preferred a market-sharing agreement among the largest exporters of temperate agricultural products. In contrast, as noted above, the U.S. took up the zero option calling for the complete removal of all types of trade-distorting subsidies and protection. During the process of the negotiations, the U.S. softened its position somewhat, offering the slow liberalization of agricultural markets through the tariffication of all non-tariff barriers, while the E.U. presented a partial tariffication proposal of its own.

Although the E.U. was prepared to consider some decrease of domestic support and external protection affecting certain commodities such as cereals, oilseeds, sugar, dairy products, and beef in the long term, a short-term priority was to improve international market stability by entering into market management agreements (Ingersent et al. 1994; Grant R. 1993). The E.U. preferred limiting production to reducing farm product prices, but the U.S. with different factor endowments was opposed to this approach. While agreeing to lower border protection of most commodities, the E.U. insisted on raising tariffs on oilseeds and cereal substitutes.

After the lengthy negotiations, the E.U. forced the U.S. to abandon the zero option. Both of the extreme parties ultimately reached a final agreement that export subsidies are to be reduced by 36 percent in value terms and 21 percent in quantity over a six-year period with the years of 1991 and 1992 as the base period. The reductions are applied to specific products or product groups, such as wheat, and wheat flour, coarse grains, oilseeds, milk powder, and sugar (Preeg 1995: 192). Yet the final resolution still allows the E.U. to continue to use the variable import levies and export subsidies in key commodities, causing a constant friction with the U.S. (Ingersent et al. 1994: 264).

3.2.3 The Cairns Group

The Cairns Group was a collective negotiating party, within the Uruguay Round, organized out of frustration among comparatively efficient agricultural exporting countries. Those countries in the Group were Argentina, Australia,

Brazil, Canada, Chile, Colombia, Fiji, Hungary, Indonesia, Malaysia, Philippines, New Zealand, Thailand, and Uruguay (McMichael 1994: 184). The Cairns Group coordinated the views of the more competent and lower-cost agricultural exporting countries and pushed their claims to a larger export market share. These countries had a common interest in ending the declining tendency of agricultural export incomes. As reflected in the Cairns Group's position to play a mediating role between the U.S. and the E.U., however, the Group was more flexible in requesting the removal of trade-distorting support and protection policies.

Maintaining about the same value of merchandise exports as Japan in total international trade, the Cairns Group nations account for around a quarter of global agricultural exports (Ingersent et al. 1994: 90-91). The Group's collective interest in less distorted agricultural trade was explicit given the fact that economic well-being for the member countries of the Group is negatively affected by agricultural protection in other nations. The initial proposal of the Group supported the complete removal of trade-distorting policies as the U.S., but it also allowed for a gradual phasing out of protective policies. The Cairns Group, taking an intermediary position between the U.S. and the E.U., accommodated its eventual positional adjustment with relatively little difficulty.

3.2.4 The East Asian Countries: Japan and South Korea

The fundamental standpoints of Japan and South Korea in the Uruguay Round were in agreement as both nations sought to reinforce their exports of manufactured goods while maintaining their national food security. Japan and

South Korea, although being the largest food-importing countries in the world with the exception for specific sub-sectors such as rice, tried to make the minimum number of concessions necessary to ensure the conclusion of the Uruguay Round without any failure. Public consensus and criticism in both nations forced the governments of the two nations to promote free trade of manufactured products to satisfy domestic industrialists, while protecting their agricultural markets (Moore R. 1993: 281). In this context, negotiators from Japan and South Korea tried to establish their positions under the E.U. umbrella in the agricultural negotiations.

Although Japan and South Korea were probably the two most irreconcilable countries with respect to free trade in the agricultural sector, both nations accepted the final deal stipulating a six-year delay in full tariffication in return for an immediate commitment on market access for imports. Japan accepted immediate rice imports of four percent of domestic consumption, increasing the volume of imports to eight percent over six years. Likewise, South Korea took the proposal of one-percent immediate imports of rice, increasing the quantity to four percent (Preeg 1995: 168). Nevertheless, the political response to the imports of rice was notably dissimilar in the two countries. The Japanese public generally accepted the government's announcement that it would open its market to rice because the country beneffited from the global free-trade system. In contrast, South Korea responded with public demonstrations and outcry on the occasion of President Kim Young-sam's announcement of the liberalization of rice imports accompanied by an apology for not keeping his presidential campaign pledge (Preeg 1995: 169). Both

nations' attitude towards national self-sufficiency partly reflected their cultural recollection of the food shortages stemming from war experiences, which is steeped in national politics and ideology.

3.3 Uruguay Round Implementation in South Korea

In South Korea, current efforts towards compliance with the GATT mirror the directives specified above. It should be noted, however, that every agricultural product is different, and the dismantling of the myriad types of protection requires a unique solution for each commodity. South Korea has accepted the agreement that it will implement tariffication of non-tariff measures and reduce subsidies. More specifically, the Uruguay Round agreement has brought about policies that will decrease domestic subsidies and other compensations for 1,417 agricultural products classified into 67 groups of products from 1995 to 2001 (WTO 1996). Presently, tariff reductions extend to the year 2004.

The negotiations and ensuing trade liberalization for each single product are complicated, but rice, perhaps the most publicized commodity, well illustrates this complexity in South Korea. As briefly described above, prior to the Uruguay Round, the importation of rice was exclusively banned except for the case of short-term supply shortages. In accordance with the GATT, comprehensive import restrictions were removed from rice in 1995. The full ban, however, was replaced with policies designed to limit access to the domestic market. Under the GATT, imports will be allowed to increase from one percent (51,300 metric tons) to four percent (estimated 205,228 metric tons) in 2004 (WTO 1996: 74). Despite

significant public outcry at the time, 120,934 metric tons (2.36 percent) of rice were imported from China and Thailand in 1996 (*Agricultural Cooperative Yearbook 1997*: 55). In addition, domestic support for agricultural producers, as measured by the Aggregate Measures of Support (AMS), is to decline from about 2.2 trillion won (approximately equivalent to U.S.$1.7 million) to 1.5 trillion won (U.S.$1.2 million) in 2004. In addition, the Korean government maintains that any direct export subsidies may not be offered to individual sectors.

Regarding post-Uruguay Round policies, a "Farm and Fishery Structural Improvement Project" was launched to provide assistance to those engaged in rice, livestock, and horticulture farming. Through this program, provincial and local agencies can provide qualifying farmers with direct income reparation as well as overseeing a commodity loan program specifically for rice growers to help them convert to other agricultural/economic activities.

3.4 The Impacts of Free Trade Agreements on Agriculture and Environment

Via food commodity chains, agro-food transnational corporations gradually connect the intricate and varied patterns of global food consumption to local agricultural production systems. As a result, a new international division of labor in agriculture is an emerging feature in the comprehensive processes of political, economic, and social restructuring of the world system. Liberalization of the agricultural sector in nation-states is regarded as a universal process of structural transformation required to remove inefficiencies and to ensure the status of a free trade regime. This indicates that local food security might be subordinated to global

efficiency in an international agro-food system based on comparative advantage and economies of scale.

3.3.1 The Agro-Environmental Dimension

The consequences of multilateral trade agreements, despite the disparate effects of their various provisions, can be assessed through analyzing existing cases. The most visible impacts of the free trade agreements on agriculture could be reduced to the following three major ramifications (McMichael 1995: 254-275).

Firstly, one salient effect of trade agreements is that they reinforce the predominant advantages of private transnational corporations in core countries by fostering overseas investment, decreasing corporate taxes, easing market competition, and increasing corporate property rights. Since the provisions of free trade agreements increasingly protect intellectual property rights, the majority of which are retained by transnational corporations in core countries, patent protection profits core countries, strengthening dominant controls over agricultural production and marketing (McMichael 1995: 259-260).

Secondly, due to the removal or mitigation of non-tariff trade barriers, it becomes more unmanageable for states to differentiate and regulate trade on the basis of regulating process and production methods. For instance, following the provision of trade agreements, nation-states are not able to restrict trade in products manufactured in ways that are detrimental to the environment. Uniform regulatory conditions could, therefore, undermine various attentive standards established to protect consumers and the environment.

Thirdly, by provisions "guaranteeing supplies of food or resource imports, and natural resources for transnational corporations and core countries," (McMichael 1995: 263) free trade agreements interfere with attempts to form aggregate production arrangements which seek to manage supplies on a sustainable basis. In other words, the exclusion of export restrictions erodes the capability of states to arrange a sustainable level of use for their natural resources. Greater environmental degradation occasioned by intensification of crop land use without proper soil management would be a consequence of unmanaged agricultural production. With the absence of import and export restrictions, and accordingly, with stabilized supplies of agricultural products and natural resources, transnational corporations may impose the costs of shortages to producers and cause environmental degradation in both peripheral and core countries.

In addition, since free trade agreements most often reduce local farm prices by eliminating farm subsidies and supply-management programs, most small-scale full-time farmers in East Asian and European countries are affected by decreasing prices and returns. For those farmers who lack the capital to benefit from economies of scale, the termination of subsidies and lower prices mean non-viability and displacement without a competitive edge. A large proportion of small-scale family farm households in many nations might become urban-migrants or laborers for rural industry depending on nation-specific capabilities to absorb rural surplus labor.

Most of the provisions of free trade agreements taken collectively benefit large agricultural traders and agro-industrial enterprises by helping them to increase global market shares and to facilitate the establishment of flexible commodity chains. The movement towards supranational regulatory mechanisms privileges transnational corporations, while limiting peripheral states' access to multilateral trade and aids.

3.3.2 The Geo-Political Dimension

On a global scale, agricultural and food systems are being transformed, but it should be noted that this transformation is equally dependent upon other economic subsectors such as finance, industrial capabilities, and the characteristics of the service sector. Restructuring entails intersectoral rearrangement, which is no longer restrained by political boundaries. As a consequence, sectoral rearrangement and the subsequent new international divisions of labor alter all economic and political landscapes, modulating the spatial arrangement. The concept of restructuring is diverse, incorporating dichotomized notions such as core and periphery; global and local; and intersectoral and intrasectoral (Ufkes 1993b). However, it is apparent that extensive spatial and sectoral changes in a transitional phase procreate constant disputes over political power control, social equity, and cultural survival.

With the formation of the WTO, Third World countries as well as major industrial countries are now actively engaged in the process of restructuring their local economies to attune to changing global political and economic circumstances.

Thus, this realigned geopolitical configuration is more likely to determine the future of agricultural producers in the new millenium. The reassertion of comparative advantage in the Uruguay Round is intended to expand world trade, especially agro-exports from developing countries, which are largely controlled by transnational corporations. Increased corporate investment in food processing operations in developing countries will be accompanied by decreased protectionism in developed countries. In this process, the nations of the former Soviet Union and the E.U. are opening their markets to the Cairns Group countries, and China as a grain exporter is straining its production basis, supplying North and South Korea and Japan markets in exchange for needed foreign currency. The U.S. continues to enjoy its comparative advantage in agriculture owing to extensive land resources and technically advanced production methods.

Trade blocs created by the E.U., NAFTA, APEC, ASEAN and other forms of regional geopolitical alignments play a critical part determining survival strategies of local farmers. In the long term, the subsequent reconstruction of the world agricultural sector within the framework of supranational forms of arrangements of production and consumption will be more expedited by multilateral trading systems.

3.5 Summary

This chapter outlined the current friction between national and international impetuses as the two impelling forces shaping the liberalization of agricultural markets of nation-states. As a result of these tensions and conflicts, the possible

adaptive strategies and the subsequent responses by local farm households have to change. The conflicting interests in, and positions on, agriculture at the beginning of the Uruguay Round were already foreshadowed by the highly idealistic and uncompromising stand of the U.S. and the equally firm defensive position of the E.U., both of which were fixed at antipodes. In the early stages of the Round, the U.S. was determined to reverse their declining share of global agricultural trade. In turn, the E.U. was heavily pressured to protect domestic markets and the interests of local farmers. The Cairns Group attempted to mediate between these two camps. In contrast, Japan and South Korea maintained a low profile of conservative position on agriculture while giving more attention to other areas of the negotiations. As shown above, the mechanisms for sectoral restructuring and international commodity specialization are increasingly arranged all over the world through the WTO and multinational organizations. The politics of agro-food systems, thus, will play a far more critical part in the greater social and economic changes defining this era of transition.

CHAPTER IV
LAND, AGRICULTURE, AND POLICIES IN SOUTH KOREA

4.1 Land Use and Policy

The Korean Peninsular is primarily composed of rugged terrain with more than 80 percent classified as mountains. For South Korea, approximately thirty percent of the total land area of 99,313 square kilometers (1996) is classified as lowlands. This portion of land accounts for most of the country's land used for cultivation and habitation (Table 4.1). Population is concentrated within the small coastal plains and the narrow inland valley areas. Most of the mountains, except for a few ranges up to 1,500 meters, are composed of low mountains ranging from 200 to 500 meters high. The Taeback mountain chain, the chief north-south trending mountain range, forms the abrupt steep slopes of the east coast but tapers gradually to gentle slopes on the west side. Throughout the country, isolated lowlands, formed by intermontane river valleys, are interspersed between the low mountain ranges. As a consequence, the agricultural soils of the river valleys and coastal plains in the west are largely alluvial sediments. The largest plains lie in the central and southwestern part of the country on the shores of the Yellow Sea.

South Korea, with an average of 450 persons per square kilometer (1995), ranks twelfth in population density among all the nations in the world (Kurian 1998: 29). In Seoul, however, the population density exceeds 16,886 persons per square kilometers (*Korea Statistical Yearbook 1997*). As shown in Table 4.2, the dramatic range of the population density among regions indicates disparate

Table 4.1 Land Use in South Korea, 1996

Category	Area (square km)	(percentage)
Total	99,313	(100.0)
Urban	4,987	(5.0)
-Residential	2,177	(2.2)
-Industrial	413	(0.4)
-Public	2,397	(2.4)
Agriculture	21,924	(22.1)
Forestry	65,396	(65.8)
Others	7,006	(7.1)

Source: Lee, Jeong-shik and Yong-woong Kim, 1998, *Shaping the Nation toward Spatial Democracy*, Anyang, Korea: Korea Research Institute for Human Settlements, p.130.

Table 4.2 Regional Population and Income in South Korea, 1995

Region	Population (persons)	(%)	Pop.Density (persons/km^2)	GRDP* (billion won)	(%)
Total	44,606,199	(100.0)	449.3	257,082.7	(100.0)
Seoul Metropolitan City	10,229,262	(22.9)	16,886.1	62,166.3	(24.2)
Pusan Metropolitan City	3,813,814	(8.5)	5,092.4	17,077.2	(6.6)
Taegu Metropolitan City	2,449,139	(5.5)	2,765.8	10,238.9	(4.0)
Inchon Metropolitan City	2,307,618	(5.2)	2,416.4	13,219.7	(5.1)
Kwangju Metropolitan City	1,257,504	(2.8)	2,508.6	5,776.6	(2.3)
Taejon Metropolitan City	1,272,143	(2.9)	2,356.4	5,532.9	(2.2)
Kyonggi Province	7,649,914	(17.1)	756.3	45,842.8	(17.8)
Kangwon Province	1,466,794	(3.3)	88.7	6,547.9	(2.5)
Chungbuk Province	1,396,481	(3.1)	187.9	8,075.0	(3.1)
Chungnam Province	1,767,105	(4.0)	206.8	9,838.6	(3.8)
Chunbuk Province	1,902,205	(4.3)	236.1	8,878.0	(3.5)
Chunnam Province	2,066,865	(4.6)	173.5	14,180.0	(5.5)
Kyungbuk Province	2,676,344	(6.0)	140.7	17,116.4	(6.7)
Kyungnam Province	3,845,569	(8.6)	332.5	30,185.0	(11.7)
Cheju Province	505,442	(1.1)	273.9	2,407.5	(0.9)

Source: Compiled from National Statistical Office (ROK), 1996, *Regional Statistical Yearbook 1996*, Seoul.
Note: *GRDP=Gross Regional Domestic Product

topography and natural environments as well as the uneven distribution of socio-economic resources. Of the total population of 44.6 million (1995), only 13.6 percent is classified as rural (Table 4.3). The urban population accounts for 86.4 percent of the total population (1995), a majority of which is concentrated in the Seoul capital region as well as the port city of Pusan in the southeastern part of the country. It is expected that the urban share of the population will increase to over 90 percent by the year 2003 (Lee and Kim 1998: 122).

With the shift of the labor force from primary to secondary and tertiary sectors of economy beginning in the 1960s, it is estimated that more than 20 million people have migrated from rural to urban areas (Lee and Kim 1998: 40). The total rural population decreased 62.05 percent during the period from 1960 to 1995 while the urban population more than quadrupled during the same period (Table 4.3). About 45 percent of the total population resides in the capital region and its surrounding satellite cities which are located within the radius of approximately 50 kilometers of the Seoul city boundary. In addition, 46.3 percent of the manufacturing employment is found in the capital region (as of 1995, Lee and Kim 1998: 20). The expansion of the Seoul metropolitan area was caused partly by the sprawl of high-rise housing complexes.

Urbanization, especially the excessive concentration of the population in the Seoul metropolitan area, and industrialization have been accompanied with intense competition over land resource resulting in the deterioration of rural areas, aggravation of intra-regional disparities, and degradation of eco-environmental

Table 4.3 Changes in Urban and Rural Population in South Korea

Unit: thousand persons

Year	Total	Urban Population (%)	Rural Population (%)
1960	24,989 (100)	8,947 (35.8)	16,042 (64.2)
1970	31,469 (100)	15,809 (50.2)	15,600 (49.8)
1980	37,436 (100)	26,891 (71.8)	10,545 (28.2)
1990	43,520 (100)	36,001 (82.7)	7,519 (17.3)
1995	44,609 (100)	38,518 (86.4)	6,088 (13.6)

Source: Lee, Jeong-shik and Yong-woong Kim, 1998, *Shaping the Nation toward Spatial Democracy*, Anyang, Korea: Korea Research Institute for Human Settlements, p.41.

qualities. Exorbitant competition over scarce land which was consequent of the uneven distribution of resources, population, and functions caused rapid increases in land prices and the introduction of strict regulations over all transactions and uses of land.

The major goals of the government's regional policies, thus, have been to promote decentralization and the dispersal of population from the metropolitan areas. This involved various policies over the years including the relocation of government institutions, universities, and manufacturing establishments to limit a further expansion of the capital region, to redirect industrial growth, and to reduce interregional disparities. The government's rigid regulations were legitimized in public on the grounds that these policies would limit capital gains from land speculation and would assure the procurement of land for public space and infrastructure. Unfortunately, these policies were often subjected to politically charged decisions. The system of land zoning and control which blocks farmland, greenbelts, forestry, or any other land designated for non-residential uses from being converted to settlements was criticized as lacking the free market mechanisms which might direct land prices (Lee J. S. 1994: 368). Cyclical land speculation and the resultant inflation of real estate prices, to a certain extent, contributed to the bubble economy in the late 1980s and the early 1990s. The booming economy pulled capital away from productive investment and replenished the land market. Land speculation was also followed by the massive construction of dwelling units. The "Two-Million Housing Units Construction Plan of 1988-1992,"

for instance, demonstrates the government's preference of an instant remedy for easing the ever-increasing demand for housing.

The history of regional policies in South Korea reveals close relationships between the stages of economic development and the distribution of population and socio-economic functions. After the post-war reconstruction period in the late 1950s, the government initiated the First Five-Year Economic Development Plan in 1962 for the purpose of alleviating poverty and promoting economic growth. The regional policies under the comprehensive economic plan focused largely on constructing industrial complexes and public infrastructure. Notably, in 1962, a major petrochemical and heavy industrial complex was constructed in Ulsan in the southeast region.

In the 1970s, the First National Land Development Plan (1971-1980) was launched to maximize economic growth. Under this first national program for regional development, new heavy industrial bases were established in Pohang, Kumi, Yochon, Masan, and Changwon in the southeast. While the southeast coastal industrial belt showed substantial growth of population and economy during the 1970s, the rate of growth of those industrial cities did not ever surpass that of Seoul (Lee J. S. 1994: 375).

In the 1980s, the Second National Land Development Plan (1982-1991) was implemented with stated goals to promote a balanced regional growth and to reduce spatial inequalities. Especially to improve the economically lagging west coastal region, the government established industrial complexes in Kunjang, Taebul, and

Kwangju. In 1988, the Sixth Republic with President Rho Tae-woo modified the approach to the chronic housing problems by shifting from the demand-control to supply-management method. The government launched five new town development projects within the capital region, such as Ilsan, Chungdong, Pyongchon, Sanbon, and Pundang, and started building two million dwelling units (Lee and Kim 1998: 18-26). The government authorized the Korean Land Development Corporation and the municipalities to procure land for housing construction, which was mostly agricultural and greenery lands, and to convert land uses into residential ones. Extreme investment in the housing sector strained land, capital, and labor markets and ultimately drove the national economy nearly into the lethargic state (Lee and Kim 1998: 110-117).

In the 1990s, under the Third National Land Development Plan, the policy to restrict the concentration of population and industrial facilities in the capital region continued. Priority was given to large infrastructure-development programs including constructing the Inchon International Airport and developing the seaports in Pusan, Kaduck, and Kwangyang. Land speculation spread from urban areas throughout the country until the early 1990s, causing land prices in urban areas to skyrocket at an abnormally rapid rate. However, landowners in underdeveloped rural areas experienced decreases in land values in relative terms. In 1990, the housing shortage in rural areas accounted for only 1.9 percent of supply while it was 38.9 percent in urban areas (Lee and Kim 1998: 95). The large spatial

variations of demand for housing reveals a much different dimension to land problems in rural areas.

Regional planning clearly entails taking into account non-economic aspects of preserving rural space such as eco-environmental quality and socio-cultural values. Strict zoning accomplishes such protection. However, it is criticized that for those whose land is restricted for development, their right to utilize property as they wish or to sell property to whom they wish, is denied by inflexible regulations on land use and development.

Considering the state's role in housing and land policies, Park (1998) argues that the Korean government's political effectiveness in controlling land speculation and investing in the housing sector was reduced by its heavy dependence upon Korea's large conglomerates called *chaebol* for the sake of national economic growth. Indeed, the scope of the government's regulations over land speculation was constrained by the *chaebols* which, as the major landowners, had huge vested interests in real estate regulations and policies. The other conventional view is that the complicated, overriding system of land regulations did not allow the theoretically efficient private sector to take part in land development effectively. The restructuring of the *chaebol*-dominant economy remains an enormous obligation for the newly formed administration with President Kim Dae-jung, particularly considering pressures from the trusteeship of the International Monetary Fund after South Korea's financial meltdown in 1997.

The new administration has recently begun to loosen land regulations and announced its plans to remove the ban on commercial development of greenbelt zones, which were imposed to constrain urban sprawl, not only in Seoul but also in small and medium cities including Chinju, Chunchon, Chonju, Cheju, Tongyong, Masan, and Changwon (Digital Chosun Ilbo, November 24, 1998). Additionally, as part of the efforts to make it easier for consumers to own their homes and to generate new employment, the government and the private sector are to construct a total of 500,000 apartments in 1999 under the Integrated Residential Development Plan (Korea Times, March 22, 1999). However, it should be noted that the financial crisis and its subsequent extensive reforms in the economy are presently playing a foremost significant role in regional and rural policies.

In summary, the historical background of South Korean land policies indicates that industrialization and economic growths pursued by the military regimes with their close relationship with the *chaebols* led to the uneven distribution of wealth and resources. This pattern is of essence to this research. The uneven regional development is ascribed to previous political leaders' regional favoritism and discrimination in selecting locations for growth-pole bases. More comprehensive and practical regional development programs which are grounded in grass-root decision-making are thus required for adjusting the centralized system to incorporate elements from development-from-below initiatives and to diminish the current regional disparities. In this context, the following sections discuss the evolution of rural policies and regionalism in South Korea.

4.2 Overview of Rural Policies

Boyer and Ahn (1991: 23) maintain that the perseverance of the centralization and the dependence on the top-down model of urban industrialization in South Korea is due to the center-down authority structure repeatedly reproduced from the Confucian tradition to the era of Japanese colonialism and during the rules of a number of military regimes. These intertwined factors made the Korean state launch highly centralized rural development programs in the absence of local government.

As shown in the previous discussion on land policies, until the early 1960s, Korea was a traditional agrarian economy with one half of its Gross National Product (GNP) generated by agriculture and a majority of its population engaged in farming. However, by adopting an export-oriented industrialization strategy, South Korea was rapidly transformed into an industrialized economy. Between 1960 and 1995, agriculture's share of total employment had decreased from 36.5 to 10.8 percent (Moon and Kang 1989; *Korea Statistical Yearbook 1996*). As Table 4.4 shows, in 1996, the manufacturing sector accounted for 25.8 percent of Gross Domestic Product (GDP), but agriculture's share in GDP, including forestry and fishing, had declined to 6.3 percent (*Korea Statistical Yearbook 1997*). Self-sufficiency in rice had been achieved until the early 1980s, but for other grains, Korea has been exclusively dependent on imports, especially from the United States. As of 1998, South Korea is the fourth largest market for the United States' export of food and agricultural products (Breth et al. 1999). Between 1986 and

Table 4.4 Gross Domestic Product by Economic Activities, South Korea

Unit: percentage

	Year						
	1990	1991	1992	1993	1994	1995	1996
Agriculture, forestry & fishing	8.7	7.7	7.4	7.0	7.0	6.5	6.3
Mining and Quarrying	0.6	0.5	0.4	0.3	0.4	0.3	0.3
Manufacturing	29.2	28.5	27.8	27.0	26.8	26.8	25.8
Electricity, gas and water	2.2	2.1	2.2	2.3	2.3	2.3	2.2
Construction	11.5	13.9	13.7	13.9	13.5	13.9	14.5
Wholesale and retail trade	12.9	12.2	12.0	11.7	11.7	11.5	11.2
Transport, storage & communication	6.7	6.7	6.8	7.2	7.3	7.3	7.6
Finance, real estatc & business services	14.9	15.3	16.6	17.0	17.2	17.1	17.4
Community, social & personal services	3.5	3.6	3.9	4.0	4.0	4.1	4.2
Producers of gov. services	7.3	7.4	7.8	7.9	7.9	7.8	8.1

Year	1990	1991	1992	1993	1994	1995	1996
GDP (billion won)	179,539	215,734.4	240,392.2	267,146.0	305,970.2	351,294.8	389,979.2

Source: National Statistical Office (ROK), 1996 and 1997, *Korea Statistical Yearbook 1996 and 1997*, Seoul.

1997, total grain imports almost doubled in quantity (258 percent in value terms), rising from 8,434,000 to 14,904,000 metric tons (Table 4.5). During this period, while imports of wheat have fluctuated slightly, those of corn and soybean increased by 233.5 percent and 172.5 percent respectively in quantity.

Self-sufficiency in rice and the dependence on imports of other food and feed grains can be better understood in light of the historical development of South Korea's agricultural policies since the 1960s. Agricultural policies, as a part of the First Five-Year Economic Development Plan initiated in 1962, were principally geared toward preventing seasonal price fluctuations and providing staple grains at low prices to urban consumers ever-increasingly employed in the tertiary sector. Under the Five-Year Plan, multitudes of programs were formulated to increase agricultural production, to aggregate and expand arable land, and to invest in agricultural research and development. Diverse institutional reforms were also carried out. The Law on Settlement of Usurious Debts of Farm and Fishing Communities was enacted in 1961 to relieve farmers of their debt burden which had skyrocketed out of control in the post-war inflationary period (Ban et al. 1980: 168). Paddy field consolidation projects, launched in the mid 1960s, were promoted to facilitate farm mechanization and increase economies of scale (Moon and Kang 1989: 35). In the Third and Fourth Five-Year Economic Plans, self-sufficiency in staple grains and the reduction of the urban-rural income disparity was considered priority objectives. Investments for land and water resources were increased, and

Table 4.5 Grain Imports, South Korea

Unit: Quantity in thousand metric tons,
Value in U.S.$ million

Year	Wheat		Corn		Soybean		Others*		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1986	3,443	438	3,697	388	944	214	350	37	8,434	1,077
1987	4,223	434	4,792	428	1,131	245	66	8	10,212	1,115
1988	4,243	538	5,236	585	1,137	313	99	12	10,715	1,448
1989	2,292	433	5,528	779	932	299	784	119	9,536	1,630
1990	2,239	395	6,198	838	1,092	289	541	117	10,070	1,639
1991	4,524	552	5,438	682	912	242	310	97	11,184	1,573
1992	3,926	580	6,386	821	1,231	316	557	139	12,100	1,856
1993	4,470	625	6,418	733	1,113	286	351	110	12,352	1,754
1994	6,124	795	5,322	635	1,299	354	427	139	13,172	1,923
1995	2,860	507	8,879	1,169	1,435	382	1,318	201	14,492	2,259
1996**	3,107	700	8,196	1,438	1,325	419	393	141	13,136	2,748
1997	3,400	633	8,634	1,368	1,628	538	1,242	249	14,904	2,788

Source: Ministry of Agriculture and Forestry (ROK), 1996 and 1998, *Statistical Yearbook of Agriculture, Forestry and Fisheries 1996 and 1998*, Seoul.
Notes: *Others include malting barley, malt, red bean, green bean, buckwheat, rye oats, grain sorghum, foxtail millet, starches, other vegetables and tubers.
**The total quantity for 1996 includes the imports of 115,000 tons of rice, which was valued U.S.$ 50 million.

the prices of fertilizer and pesticides were reduced through increased production and subsidy programs.

In an effort to improve the standard of living of the rural populace, the government launched the dual processes of modernization and commercialization in agriculture. Particularly, to integrate the rural population into the national economic development plan, the leadership instituted the "New Community Movement" (*Saemaul Undong*) in the 1970s. Originally, this rural development plan was initiated by President Park Chung-hee in 1972 with the goal of achieving broad-band improvements to village infrastructure and the quality of life in rural areas. The program was expanded in the next decade to incorporate urban neighborhoods, schools, and factories. By the mid 1970s, the whole populace became involved, and the program was assessed to be partly successful in terms of the improvement of rural infrastructure. Nevertheless, the corruption of *Saemaul Undong* leadership in the late 1980s brought destabilization, public criticism, disillusionment, and ultimately, the dissolution of the program (Boyer and Ahn 1991: 29-52).

South Korea's agricultural policies have tended to focus on farm mechanization and commercialization, but structural problems have constantly impeded the improvement of the rural situation. The Korean state exercised authoritative pressure to attain its diverse economic growth goals. Villagers had to comply with "bureaucratic overkill and confusion" (Boyer and Ahn 1991: 45). Many of the farmers who were the intended recipients of "help" came to distrust

and resent the constant oppressive directions from the central government. The trajectory of South Korea's agricultural policy development suggests that structural changes in agriculture and rural social relations are an integral part of the nation's industrial and economic development. The rice self-sufficiency policy was pursued by the state to support the work force engaged in the national industrialization project, but the rural population was not able to sufficiently participate in the government's policy-making and continued to be deprived of the many benefits of South Korea's increasing economic wealth.

South Korea offers a case to study the predicament of agricultural development when situated within a country's industrialization strategy. This problematic issue is now facing further challenges through global trade liberalization. In a "post-national regulation" (McMichael 1995), nation-states are confronted with complicated restructuring tasks in response to the globalization of the economy. In this context, the next section describes the socio-economic factors enforcing the structural adjustments facing South Korean agriculture in more detail. The goal of this section is to elaborate the nature of the conflicts between farm sector adjustment programs and industrialization strategies.

4.3 The Structure of the Korean Agricultural Sector

The major structural restraints to South Korean agriculture are considered to be the effects of the following interrelated factors: (1) a failed rural industrialization policy, (2) changing demographic trends in Korea's rural areas, and

(3) unspecialized agricultural commodity production (Wang 1989; Burmeister 1990, 1992; Boyer and Ahn 1991; Kim and McMichael 1994).

First of all, as suggested by recent analyses, part of South Korea's rural problems are attributed to the failure to develop profitable non-agricultural income sources in response to the weakening economic viability of family farm production. As shown in Table 4.6, while the proportion of non-agricultural income has increased on an annual basis, its contribution still remains relatively minor compared with the same indicator in Japan and Taiwan. During the period from 1985 to 1997, the share of off-farm income rose from 18.5 percent to 35.2 percent. What needs to be taken into account, however, is the contribution by his children and other family members who will not continue farming but rather contribute the wages they earn from jobs in close city areas. The average transferred income per household has slowly increased, yet it accounts for 19.6 percent of the total household income as of 1997 (Table 4.6). The classification of farm households by their types of income sources reveals that the number of part-time farm households whose off-farm income is higher than 50 percent is less than one third of the total (27.1 percent in 1997) (Table 4.7). The government's rural industrialization efforts have been undermined by the urban area-biased infrastructure development patterns, migration of the young, and subsequent labor shortages in rural areas. Particularly given a high average age and the lack of rural laborers, farmers find it difficult to seek non-agricultural secondary employment. The national economic

Table 4.6 Farm Household Income, South Korea

Unit: thousand won (% of total)

Year	Agricultural Income (%)	Non-Agricultural Income (%)	Transferred Income (%)	Total (%)
1985	3,699 (64.5)	1,060 (18.5)	977 (17.0)	5,736 (100)
1986	3,677 (61.3)	1,209 (20.2)	1,109 (18.5)	5,995 (100)
1987	4,016 (61.5)	1,314 (20.1)	1,205 (18.4)	6,535 (100)
1988	4,912 (60.4)	1,812 (22.3)	1,405 (17.3)	8,129 (100)
1989	5,616 (59.5)	2,152 (22.8)	1,668 (17.7)	9,436 (100)
1990	6,264 (56.8)	2,841 (25.8)	1,921 (17.4)	11,026 (100)
1991	7,035 (53.7)	3,662 (27.9)	2,408 (18.4)	13,105 (100)
1992	7,356 (50.7)	4,424 (30.5)	2,726 (18.8)	14,506 (100)
1993	8,427 (49.8)	5,041 (29.8)	3,461 (20.4)	16,929 (100)
1994	10,325 (50.8)	6,184 (30.4)	3,807 (18.7)	20,316 (100)
1995	10,469 (48.0)	6,931 (31.7)	4,430 (20.3)	21,830 (100)
1996	10,837 (46.5)	7,487 (32.1)	4,974 (21.3)	23,298 (100)
1997	10,603 (45.1)	8,278 (35.2)	4,607 (19.6)	23,488 (100)

Source: National Statistical Office (ROK), 1996, 1997, and 1998, *Korea Statistical Yearbook 1996, 1997, and 1998*, Seoul.
Note: The exchange rate (approximate figures) = U.S.$1.00 : 700 won in the 1980s; 800 won in the 1990s; and 1,000 won in 1997.

Table 4.7 Farm Households by Types of Income Sources, South Korea

Unit: households

Year	Total	Full-Time	Class I Part-Time	Class II Part-Time
	(%)	(%)	(%)	(%)
1990	1,767,033	1,052,315	389,097	325,621
	(100)	(59.6)	(22.0)	(18.4)
1991	1,702,307	1,118,750	254,135	329,422
	(100)	(65.7)	(14.9)	(19.4)
1992	1,640,853	1,025,850	252,405	362,599
	(100)	(62.5)	(15.4)	(22.1)
1993	1,592,478	985,115	236,151	371,212
	(100)	(61.9)	(14.8)	(23.3)
1994	1,557,989	930,920	236,525	390,544
	(100)	(59.8)	(15.2)	(25.0)
1995	1,500,745	849,053	277,214	374,478
	(100)	(56.6)	(18.5)	(24.9)
1996	1,479,602	835,717	243,894	399,991
	(100)	(56.5)	(16.5)	(27.0)
1997	1,439,676	844,390	205,238	390,048
	(100)	(58.6)	(14.3)	(27.1)

Source: Ministry of Agriculture and Forestry (ROK), 1996 and 1998, *Statistical Yearbook of Agriculture and Forestry 1996 and 1998*, Seoul.
Note: Class I Part-Time refers to the farm household of which agricultural income is more than 50 percent of total annual income; and Class II Part-Time indicates the farm household of which agricultural income is less than 50 percent of total annual income. Full-Time and Class I Part-Time households are officially classified as primary farm households while Class II Part-Time households are classified as part-time farm households.

slowdown in the 1990s also caused widespread job cuts and further drained away employment opportunities in most rural areas.

Nevertheless, the major direction of the post-opening farm policies in South Korea is to promote large-scale (e.g. larger than three hectares per household), full-time farming. This is in contrast to various studies recommending the diversification of income sources as a way to mitigate impacts of the instability of the agricultural markets and to reduce the income gaps between urban and rural residents. The priority of government programs including subsidies, low-interest loans, and technical support and education, for instance, is almost exclusively given to full-time, young farmers. Jung et al. (1997), in their study of the Korean rural adjustment policies in the post-Uruguay Round era, have concluded that small- and medium-scale, elderly farmers are reaping far fewer benefits from major government agricultural support projects than large-scale, young farmers[10].

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[10] Jung et al. (1997) classified the farmers in their sample according to the farmers' age and total area of farmland. The classified categories are: (1) a set of farmers who are older than 60 years of age and cultivate more than 3,000 *pyong* of land, representing a large-scale farming, aged group; (2) a set of farmers who are younger than 60 and cultivate more than 3,000 *pyong*, representing a large-scale farming, young group; (3) a set of farmers who are younger than 60 and cultivate less than 3,000 *pyong*, representing a small-scale farming, young group; and (4) a set of farmers who are older than 60 and cultivate less than 3,000 *pyong*, representing a small-scale farming, aged group. These farmers' records of application and reception of various government loans, subsidies, and education support were then analyzed. Most of the major agricultural/rural support programs, except for loan and subsidy programs for purchasing machinery and for improving living conditions including housing renovation and rebuilding, were found to concentrate on large-scale, full-time, young farmers.

It seems that international capitalism enforces the state to strengthen the capitalist, commercial development of agriculture and that this development pattern in turn reinforces class differentiation within rural society. The processes of globalization of the world agricultural and food sector, which involve the aggressive expansion of international trade, are driving some local small farmers to the brink of bankruptcy and dissolution. This is further discussed in the later chapters, but there should be some awareness of potential consequences of the commercialization of agriculture from the onset.

Furthermore, the relatively heavy dependence on agricultural income in Korean farm households is also highlighted by the rural debt situation. Rural indebtedness has detracted much from rural economic viability and has distorted property relations in rural South Korea (Boyer and Ahn 1991: 77). As Table 4.8 displays, the average debt per farm household amounted to approximately U.S. $13,000 in 1997. In the late 1980s, a high percentage of the debt consisted of borrowings from private usurers, and the financing from the underground money market imposed high interest rates. In 1987, conceding that the soaring debt problem mainly stemmed from the comparatively low returns from agriculture, the government took measures to offer about one trillion won (approx. U.S.$1.2 billion) of loans to help farmers replace their high-interest private loans with low-interest public loans (Boyer and Ahn 1991: 76). In spite of the government's recognition of the severity of rural indebtedness and the beneficial effects from an increased share of low-interest financing from agricultural cooperatives, debt still

Table 4.8 Average Farm Household Liabilities By Sources, South Korea

Unit: won

Year	Ag.Cooperatives (%)	Private (%)	Others (%)	Total (%)
1985	1,337,100 (66.1)	583,474 (28.8)	103,348 (5.1)	2,023,922 (100)
1986	1,435,468 (65.5)	642,287 (29.3)	114,358 (5.2)	2,192,113 (100)
1987	1,718,216 (71.9)	513,816 (21.5)	157,748 (6.6)	2,389,780 (100)
1988	2,511,366 (80.2)	479,503 (15.3)	140,546 (4.5)	3,131,416 (100)
1989	3,069,044 (78.7)	626,854 (16.1)	202,792 (5.2)	3,898,690 (100)
1990	3,857,665 (81.5)	655,992 (13.9)	220,743 (4.7)	4,734,401 (100)
1991	4,188,744 (80.7)	704,807 (13.6)	298,864 (5.8)	5,192,415 (100)
1992	4,559,868 (80.2)	690,912 (12.2)	432,147 (7.6)	5,682,927 (100)
1993	5,902,717 (86.4)	559,772 (8.2)	365,933 (5.4)	6,828,423 (100)
1994	6,612,864 (83.9)	596,973 (7.6)	675,595 (8.6)	7,885,433 (100)
1995	7,364,216 (80.4)	779,475 (8.7)	999,428 (10.9)	9,163,120 (100)
1996	9,836,947 (83.8)	742,368 (6.3)	1,154,407 (9.8)	11,733,723 (100)
1997	10,994,059 (84.5)	708,425 (5.4)	1,309,928 (10.1)	13,012,413 (100)

Source: Ministry of Agriculture and Forestry (ROK), 1995 and 1998, *Report on the Farm Household Economy Survey 1994 and 1997,* Seoul.
Note: The exchange rate (approximate figures) = U.S.$1.00 : 700 won in the 1980s; 800 won in the 1990s; and 1,000 won in 1997.

poses one of the most burdensome problems to farmers. While farm household income increased four times during the years from 1985 to 1997, indebtedness rose six and a half times in the same period. This clearly indicates the ever-aggravating problems associated with rural economic viability and resultant problems of destitution. Large debts are incurred by increases in land rent for tenant farmers, expenditures for education of children, and investments on machinery and production materials. Rural indebtedness represents a highly debilitating condition for most Korean family farm households.

Labor shortages, especially of young farmers, are also an increasingly significant aspect of rural problems. In 1996, 46.3 percent of the farm population was 50 years of age or older, and those of over 60 years of age accounted for about one third (28.6 percent) of the total farm population (Table 4.9). This aging rural demographic pattern basically reflects outmigration among the young.

Further, the unvarying cultivation of a staple food grain with a concurrent concentration on the beef sector has aggravated the problems associated with the inflexible agricultural market (Burmeister 1992). Rice constitutes about a half of the total value of Korean agricultural commodity production. This indicates undifferentiated crop production heavily dependent upon domestic consumption of a commodity, which is also not competitive in international markets. In 1997, rice comprised 50.2 percent of the total cultivated acreage while fruits and vegetables accounted for 25.8 percent (*Statistical Yearbook of Agriculture and Forestry 1998*). To exacerbate the situation, overall domestic demand for rice is diminishing, partly

Table 4.9 Farm Population by Age Group, South Korea

Unit: thousand persons (%)

Year	Age				
	under 19	20-49 years old	50-59 years old	60 years old and over	Total
1991	1,821 (30.0)	1,875 (30.9)	1,115 (18.4)	1,255 (20.7)	6,068 (100)
1992	1,617 (28.3)	1,791 (31.4)	1,061 (18.6)	1,236 (21.7)	5,707 (100)
1993	1,457 (26.9)	1,680 (31.1)	1,004 (18.6)	1,267 (23.4)	5,407 (100)
1994	1,313 (25.4)	1,603 (31.0)	947 (18.3)	1,304 (25.2)	5,167 (100)
1995	1,103 (22.7)	1,626 (33.5)	867 (17.9)	1,255 (25.9)	4,851 (100)
1996	1,062 (22.6)	1,457 (31.1)	831 (17.7)	1,342 (28.6)	4,692 (100)
1997	N/A	N/A	N/A	N/A	4,468

Source: National Statistical Office (ROK), 1996 and 1997, *Korea Statistical Yearbook 1996 and 1997*, Seoul.

due to a changing dietary pattern and a slowing-down of the population increase. Commodity specialization and high-value added fruit, vegetable, and flower production in particular have been somewhat successful, but increasing imports of these crops as the market opened dampened farmers' motive to invest (Burmeister 1992). For example, American grapefruits and oranges, Brazilian bananas, and Chilean grapes, when introduced, had devastating effects on South Korean growers. Cheju Province which produced tropical fruits in green houses experienced the most radical restructuring of its agricultural sector after the market opening. The banana growers in this region were essentially wiped out.

Some of these problems in rural areas can also be attributed to the predominance of small-scale farming. Whereas the government has striven to improve the agricultural structure, the majority of cultivated lands are still fragmented. As can be seen in Table 4.10, about 30 percent of farming households own less than 0.5 hectare, and the average farmland for each household is about one hectare (2.47 acres). Recently, the government removed the ban on 3 hectares for the maximum ceiling of farmland ownership in order to increase the farming scale. The proportion of farm households with more than 3 hectares in the total is still inconsequential, comprising less than 5 percent.

What is noteworthy is the political dimension of the rural situation. Most structural problems in Korea's agricultural sector have evolved mostly without political feedback from farmers (Burmeister 1990: 713). This has resulted in not only frustration, distrust, and alienation in rural areas but also continuously poor

Table 4.10 Farm Households by Cultivated Land, South Korea

Unit: households (% of total)

Year	Number of Farm Households (%)					
	without land	with 0.5ha.or less	with 0.5-1ha.	with 1-3ha.	with 3ha.or more	Total
1989	27,947 (1.6)	483,078 (27.3)	594,153 (33.5)	637,751 (36.0)	28,927 (1.6)	1,771,856 (100)
1990	23,803 (1.3)	482,703 (27.3)	544,457 (30.8)	672,537 (38.1)	43,533 (2.5)	1,767,033 (100)
1991	35,061 (2.1)	465,947 (27.4)	526,933 (30.9)	632,831 (37.2)	41,535 (2.4)	1,702,307 (100)
1992	22,854 (1.4)	468,802 (28.6)	495,809 (30.2)	600,816 (36.6)	52,574 (3.2)	1,640,853 (100)
1993	23,202 (1.4)	451,276 (28.3)	472,001 (29.6)	586,716 (36.8)	59,283 (3.7)	1,592,478 (100)
1994	24,852 (1.6)	452,841 (29.0)	448,177 (28.8)	566,679 (36.4)	65,440 (4.2)	1,557,989 (100)
1995	23,918 (1.6)	432,982 (28.8)	432,107 (28.8)	541,293 (36.1)	70,447 (4.7)	1,500,745 (100)
1996	25,274 (1.6)	440,158 (29.7)	421,356 (28.5)	522,461 (35.3)	70,353 (4.8)	1,479,602 (100)

Source: National Statistical Office (ROK), 1996 and 1997, *Korea Statistical Yearbook 1996 and 1997*, Seoul

assessments and poor management of chronic problems. In other words, the direct and indirect influences of farmers on the policy-making process have been insignificant, and the government placed itself in the position that it could only take reactive countermeasures at the peak of any given local crises. Currently, the neglected state of the rural poor continues, and the post-opening measures required by the Uruguay Round of the GATT are deepening the problems with poverty and social stratification. The past political exclusion in South Korea separated the farm sector from development policy considerations at the national and local levels. This lack of rural representation in the policy-making arena makes it difficult to formulate politically acceptable agricultural adjustment strategies to deal with market forces (Burmeister 1990). After intensive industrialization, the state subsidies sustained the inflexible agricultural sector, which in turn increasingly relied on the government support policies, but past political exclusion has made potential adjustments even more troublesome.

As described above, recent settlements have been directed towards agrarian capitalist development, such as increasing average farming scales and fostering entrepreneurial farming. In view of the constraining factors, a further reduction in the sector is expected (Burmeister 1990: 720). The state has become too ineffective to safeguard internal socio-economic well-being due to its economic reliance on international markets and the manufacturing sector. Without the protection of strategic agricultural commodity production, the Korean farm sector has to struggle for its mere survival.

4.4 Regionalism and Socio-cultural Attitudes

South Korea, despite its homogeneous language and culture, has experienced political and social cleavages deeply rooted in regional divisions in the modern history. Alliances based upon a common region, school, or kin group have shaped collective divisions in Korean society. Prominent political and economic figures have pulled a circle of followers from their associates coming from the same region particularly as a way of personalizing and perpetuating power. Some studies argue that regionalism in Korea was historically drawn from the Three Kingdom period from 57 B.C. to 660 A.D. and was thus embedded into the social setting, creating regional divisions and provincial stereotypes (Korea Times, January 25, 1999). However, it is indeed a recent phenomenon that practices of nepotism, or Confucian familism based on regional origins, prevail over any other social cleavage and mark visible differences in regional economic development patterns. Public opinion, commonly accepted, holds that the dictatorship of President Park Chung-hee in the 1960s set forth the regional division that runs deep today.

In fact, regionalism, which in a very restricted sense connotes favoritism toward the southeast provinces and discrimination against the southwest provinces, is systematically integrated not only into the government policy-making but also into recruitment patterns in bureaucratic and military posts and the job market (Yea 1994; Abelmann 1996: 264-265). With the exception of the most recent election, all of Korea's presidents came from the southeast region, and political campaigns

constantly perpetuated and reinforced regional discrimination and favoritism. In other words, the political vying between the regimes of Park Chung-hee and Chun Doo-hwan who had bases in the southeast and their long time political opponent Kim Dae-jung who hails from the southwest provoked unfortunate interregional antagonism. In this respect, it is commonly suggested that this antagonism led to the exclusion of the southwest from many socio-economic development projects. Infrastructural development and regional economic growth has fallen behind in the southwest region especially during the rapid industrial development period, although the decentralization policies in recent years (1993-1997) appears to have reduced the gaps to a certain degree.

As Table 4.11 discloses, the large regional variations in the economy generation are notable when considering aggregate statistics. Interestingly, differences in per capita Gross Regional Domestic Product (GRDP) further widened in the northwest region (Kangwon Province) vis-à-vis other locations in the 1990s, while incomes of the southwest region (Cholla Province) and the central region (represented by Chungchong Province) improved. Per capita GRDP of the southwest region amounted to only 82.7 percent of the national average figure in 1990, yet it rose to 95.7 percent in 1995. However, per capita economic generation for the northwest province (Kangwon Province) is still as much as 22.5 percent behind the national average. The development of the mountainous northwest region is largely restrained by topography, while at the same time, the mining industry, once the most important economic sector in the region, dwindled

Table 4.11 Changes in Regional Population and Income, South Korea

Region	Population Unit: persons (% of total)		GRDP* Unit: billion won (% of total)		Per Capita GRDP* Unit: won (% regional/total)	
	1990	1995	1990	1995	1990	1995
Total	43,410,899 (100)	44,606,199 (100)	177,361.9 (100)	257,082.7 (100)	4,085,653.7 (100)	5,763,385.1 (100)
Seoul (capital)	10,612,577 (24.4)	10,229,262 (22.9)	46,633.7 (26.3)	62,166.3 (24.2)	4,394,191.9 (107.4)	6,077,300.6 (105.4)
Kyonggi** (northwest)	7,973,551 (18.4)	9,957,532 (22.3)	36,227.8 (20.4)	59,062.5 (23.0)	4,543,496.4 (111.2)	5,931,439.6 (102.9)
Kangwon (northeast)	1,580,430 (3.6)	1,466,794 (3.3)	5,249.0 (3.0)	6,547.9 (2.5)	3,321,248.0 (81.3)	4,464,089.7 (77.5)
Chungchong** (central)	4,453,190 (10.3)	4,435,729 (9.9)	15,545.0 (8.8)	23,446.5 (9.1)	3,490,756.1 (85.4)	5,285,827.9 (91.7)
Cholla** (southwest)	5,716,402 (13.2)	5,226,574 (11.7)	19,305.6 (10.9)	28,834.6 (11.2)	3,377,229.2 (82.7)	5,516,921.8 (95.7)
Kyongsang** (southeast)	12,560,144 (28.9)	12,784,766 (28.7)	52,669.3 (29.6)	74,617.5 (29.0)	4,193,369.5 (102.6)	5,836,392.8 (101.2)
Cheju (Island)	514,605 (1.2)	505,442 (1.1)	1,731.6 (1.0)	2,407.5 (0.9)	3,364,911.0 (82.4)	4,763,157.8 (82.6)

Source: National Statistical Office (ROK), 1996, *Korea Statistical Yearbook 1996*, Seoul.

Notes: *GRDP - Gross Regional Domestic Product at 1990 Constant Prices

**The data on Kyonggi, Chungchong, Cholla, and Kyongsang provinces were combined with the metropolitan cities in these provinces: Inchon metropolitan city, Taejon metropolitan city, Kwangju metropolitan city, and Pusan and Taegu metropolitan cities respectively.

in the late 1980s and the 1990s. Comprehensive, comparative analyses of the structures of regional economies are necessary for conclusive results, but still this simple comparison of per capita GRDP suggests that the concentration of development efforts in the 1990s brought investment to the southwest while limiting it in the other underdeveloped, rural regions including the northwest and the central provinces.

One of the crucial elements in forcing social animosities among regions is the effect of socio-cultural experiences. In particular, the most caustic experience for residents in the southwest in the recent history was the army repression of an uprising against the military takeover by Chun Doo-hwan in the city of Kwangju in 1980. Chun staged a coup d'etat following Park Chung-hee's assassination in 1979 and launched a dictatorship on the grounds of national stability and security. The relentless suppression of demonstrators by the military forces caused civilian casualties with unofficial estimates of a death toll varying from 200 up to 2,000. As described in Chapter II, the social and cultural features of regions significantly affects the consciousness and relations of groups of people in particular location (Cloke and Milbourne 1992: 363). In this respect, it is rather apparent that the collective experience of the violent military repression in the southwest has played a role in forming the identity and socio-cultural attitudes of the region. Throughout the 1980s, the Kwangju uprising became a national example of sacrifice in the citizens' struggle for democracy and justice. As a consequence, however, the underdeveloped state of the southwest region was continuously embroiled in the

politicization process (Abelmann 1996: 218). The current government is considering that those who died, wounded, or arrested during the democratic movement are to be treated as veterans and patriots, but these sentiments come almost twenty years after the tragedy occurred (Korea Times, April 11, 1999).

At the outset of this study, it was hypothesized that regionalism in Korea might have an effect on farmers' perceptions of the state policies and several social, political, and economic issues. In the process of the selection of the research areas, thus, Chunbuk Province in the southwest and Kyungbuk Province in the southeast were chosen for a comparison of regional socio-cultural attitudes. It is important to consider whether differences exist in farmers' attitudes toward the government agricultural policies, given that regionalism is still a crucial element in the social and cultural contexts which make up modern Korea. President Kim Dae-jung, who had long been a political victim of regionalism, announced that "there will be no discrimination against specific regions in any area, including personnel management and budgeting" (Korea Times, January 26, 1999). His newly formed government is currently making efforts to eradicate regionalism, yet these efforts have already faced uncompromising reactions from the people of the southeast region.

4.5 Summary

South Korea's rural development programs reflected many of the characteristics of the country's authoritarian tradition and did not represent a significant departure from the nation's urban-industrial development strategy.

Previous rural programs achieved only a partial success in improving rural environment and in eliciting villagers' participation in self-help projects, agricultural productivity, and rural income for only a short-term period, yet the economic viability of the farm families have been aggravated as a consequence of the increasing debt to income ratio. The major rural programs did not prove sustainable, primarily because of overexpansion and corrupt leadership in the 1980s. Modification of the centralized system to incorporate elements from development-from-below decision-making to diminish urban-rural disparities, thus, is required for more generalized and practical regional development.

Further, regional prejudice still poses a major political and social obstacle for balanced interregional development. Regional sectarianism in past economic development policies resulted in the inefficient allocation of resources and an excessive concentration of people and socio-economic functions in urban areas. A political cleavage based on interregional animosity brought about a sense of discrimination against the southwest region. Spatial democracy is contingent upon democratic development as well as a removal of inequalities in political and socio-economic fields. The different regional identities and socio-cultural attitudes are one of the bases of the research hypotheses of this study. The variations in farmers' perceptions of the major rural socio-economic issues are tested and discussed in the following chapters.

CHAPTER V
SURVEY DESIGN AND IMPLEMENTATION

The selection of a research methodology requires an appreciation and a balancing of the advantages of different approaches and goals. The theoretical considerations and empirical requirements of the research subject should be weighed in light of the particular geographical and temporal settings. As stated in Chapter I, the objectives of this study are to identify the linkages between the internal structural factors and the external global factors of agrarian changes in South Korea and to explore how the lives of farm families have been affected by changes in the direction of government policies. In other words, the purpose of the study is to better comprehend the external global influences upon the agro-food sector of South Korea by interpreting changing rural socio-economic conditions faced by farm households. The selected methods employed to acquire empirical data used in this study included a mail survey and personal interviews. This chapter describes the design and implementation of the survey, the geography of the survey locations, the characteristics of the sample population, and cross-tabulations of some selected variables derived from the survey data.

5.1 Survey Development and Implementation

The major factors posing structural adjustment problems of the South Korean farm sector were identified from (1) a review of government statistical documents, previous research, and the news media, (2) a mail survey sent to farm households in Kyonggi, Chubuk, and Kyongbuk Provinces, and (3) personal

interviews with farmers and local government officials. The purpose of the mail survey, which was conducted during June and July of 1997, was to explore farmers' perspectives on current rural socio-economic issues and agricultural market opening, opinions about government policies in response to changing circumstances, satisfaction with living conditions, and short-and long-term plans for their farms and occupation.

The questionnaire was first developed in 1996 after conducting the review of literature across relevant fields. In order to include appropriate vocabulary, phrases, and layout in the question items, it was shown to several agricultural extension personnel in the survey areas. Agricultural extension staffs in Rural Guidance Offices in Korea have hands-on experience with counseling farmers and conducting informal surveys in rural communities. Three government officials in Ichon-shi Rural Guidance Office of Kyonggi Province and two government officials in Chongup-shi Rural Guidance Office of Chunbuk Province reviewed the questionnaire and provided some suggestions about the format and wording of question items. These officials also willingly furnished information on specific local conditions of farming practices as well as the common concerns of rural residents. After this process of reviewing and making changes in the structure, wording, and sentence construction of question items, the questionnaire was then pre-tested in December of 1996 and January of 1997. The pre-survey was conducted with twenty farmers in Chongup-shi of Chunbuk Province. Through this pilot test of the survey and face-to-face interviews, a few question items were

dropped and added. For example, the item about identifying the importance of organic farming was removed in consideration of the interviewees' suggestion. The farmers acknowledged the growing importance of organic cultivation and the increasing consciousness of residual pesticides in produce by consumers. Nevertheless, these interviewees all reported that they could not afford to grow crops organically given the lack of manpower and a small and unsteady harvest. According to the interviewees' explanation, although organic farming needs more care and labor, not only are rural laborers difficult to acquire but also the high costs of the additional labor offset the economic returns. In view of the interviewees' confusion and conflicts over their own situation and the general public consensus, this question item was excluded from the form. However, regarding household data, the categories of the annual household income and debt were added to the revised form because some of the interviewees were reluctant to provide an exact sum but were willing to approximate the numbers. Moreover, it was presumed that these categories could be used as surrogate variables in case of missing data.

The revised questionnaire was then reviewed by the author's major professor at Louisiana State University, a researcher in the Korea Rural Economics Institute, and three government officials in Ichon-shi Rural Guidance Office. In this process, the sequence of question items and wording and construction of sentences were further modified in response to comments and suggestions from the interviewees. The questionnaire was again tested with a small sample of farmers in Ichon-shi and Suwon-shi of Kyonggi Province. The question items in the final

version of the questionnaire were designed (1) to gather opinions about agricultural trade liberalization, (2) to identify the major factors related to rural economic and social problems, (3) to determine the degree of satisfaction with living conditions, (4) to obtain information on the short-term and long-term farming plans, and finally (5) to collect household economic and demographic information (Appendix A). All of the questions were grouped within categories in order to clarify the nature and meanings of questions to respondents.

In the first part of the questionnaire, respondents were asked to fill out a section related to satisfaction with current living conditions. The variables listed in this section included transportation, quality of medical care, cultural/educational opportunities and facilities, quality of water and sewage facilities, garbage disposal and sanitation, quality of housing facilities, and accessibility to goods and services. A five-point anchored scale with a range of points from very dissatisfied to very satisfied were provided in this section.

The next section investigating rural social problems included questions on difficulty for young farmers to find a spouse, the problem of increasing abandoned houses and lands in rural areas, and the disadvantages of rural zoning programs. In addition, the items to identify factors related to rural economic problems included rural labor shortages, difficulty in doing the farming due to aging, increasing indebtedness, market opening, the availability of non-farm secondary employment, rising production costs, and the current inefficient agricultural marketing structure. Respondents were asked to indicate whether they consider each factor to be

important in their own economic and social conditions. These listed items were also measured with a five-point anchored scale ranging from not important to very important.

In the following section, respondents were queried regarding their opinions related to the government's decision to open the domestic agricultural markets. The items in this part also included their opinions regarding the prospects of modernization and mechanization in the agricultural sector after the market opening, the benefits of the market opening to urban consumers, and the need for agro-industrial development programs. The seven items in this section were each measured with a five-point scale ranging from strongly disagree to strongly agree.

Questions regarding current and future plans for agricultural land and farming practices were also asked. Respondents were requested to indicate their plans to sell, rent, or bequeath their farmland and their children's intention to continue farming. Household economic and demographic information of the farm household was collected in the survey as well. At the end of the survey form, open-ended questions were included to ascertain farmers' opinions in their own words. The "open-ended" comments were considered to be crucial in providing a unique picture of the current rural situation from the respondents' viewpoint.

According to the 1990 Korean Agricultural Census, the definitions used to officially designate the farm household are (1) a household cultivating farmland of 302.5 *pyong* (10a) or more, (2) a household raising one or more milk cows, beef cattle, and Korean native cattle, (3) a household raising more than three heads of

medium size animals (e.g. pig, goat, and sheep) (4) a household raising more than 40 heads of small animals (e.g. rabbit), and (5) a household raising more than five hives of honey bees. In this research, the term "a farm household" is used primarily to provide a classification of a household economic unit as indicated in the above definition. However, family ownerships of land combined with family labor are still major components of the denotation of farm households in the Korean case. In other words, a farm household in Korea represents a combined unit of production, consumption, and kinship. In this study, thus, the terms "a farm household," "a family farm household," "a family farm," and "a farm family" are interchangeably used to describe a unit of production characterized at the family level.

In Korea, a patrilineal stem family household has traditionally been the basic unit of the society. Under the patrilineal, or patrilocal, stem family structure, elderly parents co-reside with the oldest son or his/the other sons' nuclear family which is formed when they get married. Daughters, after their marriage, are considered as outsiders with regard to their natal family. Choi (1996: 5-7), based on the 1990 Korean Census, reports that three out of four persons aged 60 or over live with married or unmarried children whereas one in four lives with his or her spouse only or alone. Still, the proportion of those who live alone or only with a spouse is rising primarily due to increasing individualism and urbanism, both of which have affected the traditional family structure.

In the survey, the head of household was requested to provide demographic information on the members of household who currently live together in the residence. Variables for each person included age, gender, family relationship, educational level, and occupation (Appendix A). Respondents were asked to specify the sources and amounts of gross annual household incomes as well as those for debts. The opinions expressed by the head of household were later analyzed on the basis of the demographic data.

The sampling method used for the survey was based on a disproportional stratified convenience sample with specific entry criteria. The sample population selected in the survey was farm households recognized as "primary" or "pure" farm households in the Korean government statistics, which include full-time farm households and Class I part-time farm households of which agricultural income accounts for more than 50 percent of total household annual income. Then, the "primary" households were roughly classified into large- (e.g. larger than two hectares of paddy), medium- (e.g. one to two hectares of paddy), and small-scale (e.g. smaller than one hectare of paddy) farm operations according to their cultivated land area and the number of livestock and poultry. These criteria of classification are conventionally employed in most of Korean official and unofficial statistical summaries. On the basis of this farming scale classification, at least two households of each type were chosen in each township-level administration district (*up* or *myon*). This method was designed to produce representative samples for the widest possible range of farm types. Since the sample of farm households, chosen

by a non-probability sampling method, is not random, the findings in a statistical sense cannot be generalized beyond the sample itself.

With regard to the survey areas as they are distributed in South Korea, three of the total of eight provinces (excluding Cheju) were selected on the basis of the region's level of agricultural specialization and their geographic locations. Those selected provinces are Kyonggi, Chunbuk, and Kyongbuk Provinces. Some descriptive characteristics of these survey provinces are provided in the following section.

For the method of administrating questionnaires, mail surveys were employed in consideration of the cost and practicalities of conducting the survey. In general, the format and type of questions are affected by the different methods of administration (e.g. personal interviews, telephone interviews, and mail surveys) (de Vaus 1995: 112-113). It has been pointed out that respondents tend to provide socially desirable opinions rather than their own true opinions in personal interviews. Thus, particularly when socially or politically sensitive issues need to be asked, mail surveys are regarded more suitable than face-to-face interviews or telephone surveys (de Vaus 1995: 108-109). One of the disadvantages of mail surveys, however, is that it is difficult to control who completes the questionnaire. In fact, although who will receive the questionnaire is specified, it cannot be sure that the selected person actually fills in it. For the present study, mail surveys, despite their disadvantages, were decided as a method of administrating

questionnaires in view of the type of questions and the cost differences between obtaining assistants in personal interviews and implementing mail surveys.

In mail surveys, functional literacy needs to be taken into account. The information sources for farm households in Korea are based on community meetings and the news media including television viewing and newspaper subscriptions. Literacy in South Korea is 96.3 percent of adult population (as of 1994-1995) (Kurian 1998: 290-292). Although economic well-being and educational attainment, which influence functional literacy, are low in rural areas compared to urban areas, rural residents in Korea are equally exposed to the national and regional television coverage[11]. In addition, farm households obtain information from formal/informal community meetings and the printed media including newspapers and magazines. Since the head of household has to fill out application forms regarding various loan programs and agricultural extension services, functional literacy of males is relatively high. In this respect, the instructions which accompanied the survey requested that the head of household complete the questionnaire.

Finally, during the period from June 23 to 30 of 1997, questionnaires were mailed out to 630 sample farm households, with 210 forms send to households in each of the three provinces. The questionnaire included a cover letter and a separate note indicating the purpose of the survey, an expression of appreciation to the

[11] Jung et al. (1995), based on their survey sample, report that about 94 percent of farm households own a color television set as of 1994.

respondents for their participation, and instructions for returning the completed questionnaire. The packet also included a postage-paid, self-addressed return envelope and a pen as a material incentive. A week after the initial mailing, a reminder postcard was sent out to all non-respondents. According to previous studies on the methods of survey implementation, it has been reported that a response rate of between 60 and 75 percent can be assured with well-conducted mail surveys (de Vaus 1995: 107). For this survey, it had been expected that at least a half of the respondents would return the questionnaire. The total response rate was 77 percent. Only completed surveys were considered to be usable. Those questionnaires which did not include answers to all of the questions were excluded from the analysis. Most respondents returned the completed survey within one month, but it took up to three months for the last survey form to be returned.

In addition to the mail survey, during June and July of 1997, interviews with farmers and government officials were conducted in the three survey provinces. The purpose of the interview was to gather more comprehensive information on the current rural problems and to gain a better understanding of regional issues. The results of these interviews provided the framework for the subsequent analyses of the survey data and were vital with respect to the interpretation of results. The subject matter of interviews was based on the items in the questionnaire. In most cases, a multitude of supplementary questions about local issues and living conditions were asked after the head of household completed the survey form. A

majority of farmers provided their opinions about government policies and programs, their own experiences with local agricultural cooperatives, and their concerns about decreasing prices, multiplying debts, and deteriorating health. The interviews were carried out with 33 farmers in Kyonggi Province, 26 farmers in Chunbuk Province, and 28 farmers in Kyongbuk Province. The interviewees were selected by the purposive, convenience sampling method. The interviews took approximately twenty five to thirty five minutes when only the survey form was filled in. In some cases where the interviewee was willing to provide a detailed description of his personal experiences, such as the recent extreme drop in prices and the enumerated accounts of his yearly production costs, the interviews lasted from forty-five minutes to two and a half hours. The results of interviews were critical especially in the content analysis of respondents' comments on the open-ended questions in the survey form.

Government officials in Rural Guidance Offices also offered their accounts of the major rural social and economic issues and prospects of the agricultural sector. Interviews with public officials were conducted in Ichon-shi Rural Guidance Office and Pyongtaek-shi Rural Guidance Office in Kyonggi Province; Taein Farmers' Consultation Office and Chongup-shi Rural Guidance Office in Chunbuk Province; Andong-shi Rural Guidance Office and Bonghwa-gun Rural Guidance Office in Kyongbuk Province (Appendix B). In Korea, the Rural Guidance Offices serve as conduits for government information for farmers by introducing advanced

production technologies and management skills, consulting and screening financial-aid applicants, and administering education programs for rural residents.

5.2 Locations of the Survey

For survey areas, three of the total of eight provinces excluding Cheju in South Korea were selected on the basis of their levels of comprehensive economic development, their level of agricultural involvement including crop specialization, and their geographic locations. Those selected provinces are Kyonggi, Chunbuk, and Kyongbuk (Figure 1.3; Appendix C, D, and E). Also, as introduced in Chapter IV, these locations were chosen to explore whether regional sectarianism has played any role in shaping farmers' opinions on government policies, given the different regional political alignments for Chunbuk and Kyongbuk Provinces.

Kyonggi Province, surrounding the capital of Seoul, has long been the focus of the industrial capital region. While the regional economy is least dependent on agriculture among the three provinces covered in the survey, the farm sector in this province is largely diversified with a wide variety of commercial crops including fruits, vegetables, house plants, and other specialty crops. Still, the proportion of crop land sown to rice account for over 56.8 percent as of 1996 (Table 5.1). The production of fresh vegetables, importantly winter season fresh vegetables, has been one of the significant recent changes for agriculture in this region. Vinyl greenhouses have rapidly expanded in the province with the government's introduction of this technology and capital especially since the 1970s. As such,

Table 5.1 Planted Area by Crops, South Korea, 1996

Unit: hectare (%)

Province	Planted area by crops					
	Total	Rice	Vegetables	Greenhouse Vegetables	Orchard Crops	Other
Kyonggi	220,524 (100)	125,225 (56.79)	24,726 (11.21)	12,413 (5.63)	8,221 (3.73)	49,118 (22.64)
Kangwon	120,809 (100)	46,770 (38.71)	28,420 (23.52)	1,662 (1.38)	1,723 (1.43)	45,583 (34.96)
Chungbuk	146,169 (100)	60,202 (41.19)	24,459 (16.73)	1,727 (1.18)	12,479 (8.54)	50,966 (32.36)
Chungnam	272,344 (100)	172,043 (63.17)	32,026 (11.76)	9,333 (3.43)	12,089 (4.44)	51,111 (17.20)
Chunbuk	254,675 (100)	152,793 (60.00)	34,258 (13.45)	4,892 (1.92)	5,579 (2.19)	55,323 (22.44)
Chunnam	425,782 (100)	200,222 (47.02)	70,017 (16.44)	9,699 (2.28)	17,601 (4.13)	127,850 (30.12)
Kyongbuk	317,939 (100)	134,769 (42.39)	48,133 (15.14)	11,278 (3.55)	61,051 (19.20)	70,249 (19.72)
Kyongnam	236,967 (100)	114,572 (48.35)	24,595 (10.38)	17,928 (7.56)	23,428 (9.89)	63,409 (23.82)
Cheju	65,004 (100)	167 (0.26)	11,207 (17.24)	202 (0.31)	26,678 (41.04)	28,605 (41.15)

Source: Ministry of Agriculture and Forestry (ROK), 1997, *Statistical Yearbook of Agriculture and Forestry 1997*, Seoul.

access to the massive Seoul market was also a crucial factor in the expansion of greenhouses.

Chunbuk Province, located within the southwest coastal plain, is the region most dependent on field agriculture and grain production. Chunbuk Province, endowed with a fertile ground and mild climate, has historically formed Korea's rice belt region with Chungnam and Chunnam Provinces. Agricultural development of the rice-bowl provinces are related to several factors including natural endowments and the intensive development of irrigation during the Japanese colonial period in the interests of supplying food grains to the Japanese military and consumers. It is also the result of Korean government policies subsidizing rice production in line with the national policy of self-sufficiency in food grains after the Korean War. Despite containing the most fertile soil in the nation, however, Chunbuk is the least economically developed among the three provinces in the survey. The underdeveloped conditions of the southwest region are largely due to historical and political reasons. Particularly, the economic development in the southwest, which was far neglected compared to the capital region and the southeastern provinces during the industrialization of the national economy, owe to regional sectarianism in the political arena. The regional economic gap was widened during the period of the rapid national economic growth. The southwest region was virtually excluded from the development of industrial bases and experienced the most immense migration of population to urban centers. The absence of major cities, on the other hand, also hindered the sustained growth of

the region. Chunbuk's agriculture is less diversified than the other two provinces with limited high-value greenhouse and orchard-crop production. Rice harvests amount to 85 percent of the total agricultural production (1996) as two-thirds of the cultivated area is comprised of irrigated rice fields (Table 5.1). The concentration on grain production in this region is affected by strict government agricultural land use regulations as well.

Kyongbuk Province, located within the southeast highlands, holds an intermediate position in agricultural development compared to the other two provinces incorporated in the survey. In terms of planted area, hilly Kyongbuk Province has the highest percentage of orchard land as a proportion of arable land while also having the low amount of paddy (Table 5.1). Fruit growers in Kyongbuk Province produce the largest amount of apples in the nation. In addition, abundant crops of peaches and prunes are grown in the province. In this respect, the farm families in Kyongbuk have faced the great amount of competition with international producers. Tree crops were once profitable in Korea, but profit margins have declined with increased imports. Whereas the provincial capital of Taegu and other medium-sized cities located in the southern part of Kyongbuk have significantly contributed to the regional economy, the northern section of the province was relatively behind in its economic growth until the government's recent investment. Due to rugged terrain and limited access to high-order service centers, the northern part of the province had long been economically deprived. Thus, cultivating tree crops has served the region well and has provided an

important economic basis in mountainous areas of the northern part of Kyongbuk Province.

5.3 Characteristics of the Sample

The sampling method employed allowed a relatively representative group of farmers to be collected. Based upon comparisons with national statistics for similar variables available from government statistics, however, the respondents' farm operations were much larger, with more cultivated land and higher incomes than national averages. These discrepancies to be primarily due to the fact that this study required farm families participating in the survey to be full-time farmers and Class I part-time farmers who derive more than a half of their total household income from agriculture. Moreover, differences in farm scales were intentionally built into the survey. Full-time (844,390) and Class I part-time (205,238) households accounted for 73 percent of all farm households (1,439,676) according to the national statistics taken in 1997 (*Statistical Yearbook of Agriculture and Forestry 1998*).

Some descriptive summary statistics broken down by the three provinces of the survey are shown in Table 5.2. The different environments and agricultural economies encountered by farmers in each province are illustrated by differences in land use and are further underscored by the different sources of income in each province. The overall median annual income for a farm household in the survey was approximately 25,500,000 won (equivalent to approximately U.S.$25,500 in 1997) with the median debt of 15,000,000 won (approx. U.S.$15,000). Korean

Table 5.2 Characteristics of the Survey Sample

Category	Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184	Total N=483
Age of Head of Household (age)				
Mean	49.7	52.5	49.8	50.6
Std. Deviation	9.3	10.2	9.5	9.7
Number of Household Members (persons)				
Mean	4.4	4.1	3.8	4.1
Std. Deviation	1.4	1.7	1.6	1.6
Total Household Income (won)*				
Mean	40,513,961	24,805,862	29,435,815	31,578,033
Std. Deviation	30,387,737	25,484,415	16,605,774	28,760,849
Median Household Income (won)*				
	30,000,000	19,500,000	26,000,000	25,500,000
Total Household Debt (won)*				
Mean	46,096,104	9,804,069	29,190,761	25,157,509
Std. Deviation	45,414,296	4,324,874	28,117,032	34,126,421
Median Household Debt (won)*				
	30,000,000	10,000,000	20,825,000	15,000,000
Total Cultivated Land (*pyong*)**				
Mean	8,467.0	7,156.4	6,752.5	7,431.1
Std. Deviation	8,505.1	6,859.8	3,460.6	6,480.9

Notes: *1,000 won = approximately U.S.$1.00 (1997)
**3,000 *pyong*=1ha

government statistics reveal that the mean national gross income for a farm household was 23,298,000 won (approx. U.S.$23,298) in 1996, while the average debt was 11,734,000 won (approx. U.S.$11,734) (Table 5.3).

Among the three provinces in the survey, Kyonggi farmers in the survey have the highest median household income (approx. U.S.$30,000), whereas Chunbuk farmers' earnings amount to only 65 percent of Kyonggi farmers. The figures for the sample population can be compared with Table 5.3 showing the national statistics. For the Chunbuk sample, almost 55.2 percent of household agricultural income is derived from sales of rice (Table 5.4). When all field crops are considered, this figure rises to 80.2 percent of total agricultural income. In contrast, income from rice accounts for only 19.5 percent of income in mountainous Kyongbuk Province (Table 5.4). Sales of fruit in Kyongbuk, however, are most important and account for 41.8 percent of all income. The more diversified characteristics of Kyonggi Province, surrounding Seoul, is also reflected in the sample households with rice accounting for 41.2 percent of income, field crops 29.2 percent, fruits 16.7 percent, and livestock 11.2 percent (Table 5.4).

The "greying" of the Korean agricultural work force is also apparent in the survey sample. The overall survey mean age (N=483) was 50.6 years, with Chunbuk slightly higher at 52.5 years. The "greying" of the agricultural work force represents a problem which is affecting every nation with a significant portion of small family farms, and one which represents a significant concern among the

Table 5.3 Incomes and Debts of Farm Households by Province, South Korea, 1996

Unit: 1,000 won

Province	Gross Income	Agricultural Income	Non-Ag. Income	Transferred Income	Debt
Total	23,298	10,837	7,487	4,974	11,734
Kyonggi	28,788	9,022	14,321	5,445	16,040
Kangwon	20,163	9,011	6,094	5,058	13,112
Chungbuk	22,359	10,404	6,691	5,264	12,439
Chungnam	26,506	14,462	6,581	5,463	13,122
Chunbuk	22,660	10,716	6,040	5,904	8,819
Chunnam	19,478	9,026	5,598	4,854	10,296
Kyongbuk	22,591	12,178	5,570	4,843	11,331
Kyongnam	22,457	8,889	9,735	3,833	10,576
Cheju	29,903	18,362	8,008	3,533	11,626

Source: Ministry of Agriculture and Forestry, 1997, *Report on the Farm Household Economy Survey 1996*, Seoul.
Note: 850 won = approximately U.S.$1.00 (1996)

Table 5.4 Proportional Sources of Agricultural Income by Crop Type for Survey Provinces, South Korea, 1997

Crop Type	Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184	Total N=483
Rice	41.2 %	55.2 %	19.5 %	37.1 %
Field crops	29.2 %	25.0 %	28.2 %	27.4 %
Fruits	16.7 %	4.5 %	41.8 %	22.6 %
Livestock	11.2 %	12.4 %	7.4 %	10.1 %

Source: Survey Data, 1997.

households in the sample. The average number of members of a sample farm household was 4.1 persons. Kyongbuk was below the grand mean with 3.8 persons.

The average land area cultivated by a household was 2.47 hectares (7,431 *pyong*), but there were significant differences across the three provinces. Kyonggi respondents had an average of 2.82 hectares while Chunbuk and Kyongbuk farmers had 2.39 and 2.25 hectares respectively.

5.4 Examination of Survey Data by Location[12]

The survey data were compiled and summarized by using contingency tables and the chi-square statistic for a close examination of locational characteristics of each question item. This section reports on the results of the cross-tabulations of some of the survey information. The format of the opinion question was five-point anchored scale from strongly disagree to strongly agree. However, for the results presented in this section, the five categories were collapsed into three: 1) I *agree* with the statement, 2) I am *neutral* to the statement, and 3) I *disagree* with the statement. In all following tables, the percentage of farmers with neutral responses can be calculated by subtracting all positive and negative responses from one hundred percent.

In response to the main concerns which emerged based on initial interviews, the first portion of the survey investigated respondents' perceptions on the quality

[12] This section has been accepted and is in press as a research note by Heesun Chung and Gregory Veeck in *Asia Pacific Viewpoint* (1999, Vol. 40, No. 3, pp.271-284). Minor changes have been made to the journal article in order to meet the format of this dissertation.

of life of farm families. To this end, the first set of questions reported here in Table 5.5 relate to current conditions in rural areas including the respondents' satisfaction with transportation, health care, cultural/educational facilities, sewage, housing, sanitation, and access to shops.

Of the seven measures, responses for four items were found to be statistically different (at $p \leq .05$) across the three provinces (Table 5.5). On the whole, farmers in Kyongbuk and Chunbuk expressed greater levels of dissatisfaction with transportation, health care, education, and housing. Alternately, sanitation was a greater issue in Kyonggi than elsewhere, partly reflecting concern about industrial pollution and garbage disposal, which are less of an issue in less industrialized regions.

Just as there were high, but variable levels of dissatisfaction with the rural quality of life, responses to the questions related to major social and economic concerns (Table 5.6 and 5.7) also scored differently from province to province. Respondents were asked their opinions regarding major social problems including finding a spouse, farm abandonment, agricultural zoning, labor shortages, aging labor supply, limited employment opportunities, opening markets, inadequate marketing, and rising input costs. The difficulty of young farmers to find spouses was seen as the most critical problem by virtually all farmers participating in the survey. While concern is high everywhere, it is slightly greater in Chunbuk and Kyongbuk Provinces which also have the greatest amount of migration involving young men and women. Young farmers, especially the oldest sons, may remain to

Table 5.5 Satisfaction with Rural Living Conditions in South Korea, 1997

Are you satisfied with the following in your area?

Unit: percentage

Total Sample N=483		Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184
Transportation	Yes	33.1	25.5	39.7
X^2 =12.5 p=.01	No	25.3	28.3	31.0
Medical/Health Care	Yes	15.6	12.4	9.2
X^2 =6.11 p=.19	No	40.9	49.7	52.7
Cultural/Educational	Yes	11.1	9.0	3.8
Facilities	No	52.6	54.5	66.8
X^2 =11.4 p=.02				
Water/Sewage	Yes	11.7	10.3	14.7
X^2 =4.6 p=.33	No	51.3	53.8	42.9
Housing Quality	Yes	31.2	20.0	18.5
X^2 =22.9 p=.0001	No	18.2	41.4	32.6
Garbage/Sanitation	Yes	5.2	4.1	15.8
X^2 =26.6 p=.0001	No	63.0	72.4	49.5
Shopping Convenience	Yes	24.7	19.3	22.3
X^2 =6.3 p=.18	No	20.1	32.4	28.8

Source: Survey Data, 1997.

Table 5.6 Regional Differences in Social Concerns in Rural Areas of South Korea

Which of the following problems are important in your area?

Unit: percentage

Total Sample N=483		Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184
Difficult to find a potential wife	Important	89.0	95.9	96.7
	Not Important	2.6	1.4	0.5
X^2 =10.6 p=.03				
Increase in abandoned houses and fields	Important	64.3	69.0	76.6
	Not Important	13.6	7.6	8.7
X^2 =8.9 p=.06				
Difficult to change agriculture-only zoning	Important	70.8	66.9	75.5
	Not Important	8.4	6.2	8.7
X^2 =6.45 p=.17				

Source: Survey Data, 1997.

Table 5.7 Identifying Major Problems in Rural Areas of South Korea in 1997

Which of the following problems do you think are important?

Unit: percentage

Total Sample N=483		Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184
Shortage of labor	Important	85.1	87.6	90.8
X^2 =2.6 p=.62	Not important	5.8	4.8	3.8
Difficulty in doing the farming due to aging	Important	84.4	87.6	92.4
	Not important	5.8	3.4	2.7
X^2 =5.9 p=.21				
Few non-ag. jobs	Important	47.4	61.4	56.0
X^2 =7.9 p=.09	Not important	18.8	10.3	16.8
Growing debt burden	Important	77.9	79.3	88.0
X^2 =12.3 p=.02	Not important	3.2	2.1	4.3
Open markets	Important	86.4	91.7	93.5
X^2 =6.3 p=.18	Not important	2.6	1.4	2.2
Rising production costs	Important	88.3	80.0	87.5
X^2 =5.5 p=.24	Not important	1.3	3.4	2.2
Current inefficient marketing	Important	81.8	78.6	84.8
	Not important	1.9	2.8	1.6
X^2 =2.2 p=.70				

Source: Survey Data, 1997.

inherit the farmstead, but there is little to hold young women (Table 5.6). In the early 1990s, civic groups such as "the Committee to Help Find Brides for Farm Bachelors" attempted to introduce various programs to find women who settle on the farm, which also included the so-called "picture brides" of ethnic Koreans from China. However, when subsequent marriages ended in divorce or couples were mismatched, the programs soon ended.

Correspondingly, the increase in abandoned farmsteads in recent years was also viewed with alarm by all, but respondents in less developed areas registered the greatest amount of concern. Farms are abandoned because of debt, the dissatisfaction of sons with the lifestyle, or alternately because there is no one left to farm. In the end, this also gradually affects the small and vulnerable service sector since in such places demand declines with the decreasing population.

Frustration with South Korea's restrictive agricultural land use zoning regulations was high for all respondents in all locations, but it was lowest in the rice-producing province of Chunbuk perhaps because of lower demand for land for non-agricultural purposes. This last finding gets to the root of South Korea's agricultural dilemma. As long as the government restricts the sale of land zoned for agriculture, farmers cannot secure market value for their property should they wish to leave agriculture or sell some farmland to regain solvency. Arable land has been tightly controlled for national food security purposes, but this restriction represents an unfavorable and inordinate constraint on farm families. Farmers have long held

the perspective that other forms of government support are provided, in a real sense, in exchange for strict zoning.

Problems associated with the labor supply (Table 5.7) were seen as important by a majority of the farmers participating in the survey. In 1996, 46.3 percent of farm population was 50 years of age or older, and those of over 60 years of age occupied about one third of the total farm population (*Korea Statistical Yearbook 1997*). The lack of alternative off-farm employment, however, was viewed as important by only 47.4 percent of respondents in Kyonggi Province presumably because access to non-farm jobs is considerably greater than in the other two provinces. Partly due to the lack of alternative skills and the low availability of employment opportunities, farmers have difficulty in seeking non-agricultural part-time jobs.

It does not appear that these farmers anticipate that conditions will improve in the future. The respondents were asked about future plans for their family's farm after the GATT is implemented. Of the 483 respondents, 74.3 percent reported that they do not believe their children will remain engaged in agriculture while 22.2 percent say children will continue to farm family land and 3.5 percent "don't know". As with many other scales in the survey, this result varied significantly ($p=.007$) across locations with the highest number of respondents (79.3 percent) saying their children will not continue farming coming from Kyongbuk, where fruit crops are already exposed to the greatest competition from imports. In comparison,

64.3 percent of farmers in more prosperous and agriculturally diverse Kyonggi reported that their farms will cease operation with the next generation.

Debt, probably the most pressing domestic issue facing South Korean farmers apart from land use zoning regulations and finding a wife, was also viewed as a greater concern in Kyongbuk (Table 5.7). This is reasonable given that growing tree crops on terraces represents high levels of sunk capital made possible often only by loans. The greater diversity of Kyonggi farm operations may, for the time being, offer greater protection to these farmers. Further, the market for vegetables, flowers, shrubs, and other high return perishable products has been less affected by imports compared to fruits and grains.

Turning to the issue of recently implemented farm policies, it should come as no surprise that the majority of South Korean farmers are dissatisfied with the government's efforts. Again, the locations registering the greatest pessimism are where domestic markets are most vulnerable and exposed. In Kyongbuk, 69 percent of farmers in the survey perceive that the government's new policies are inconsistent and illogical (Table 5.8).

The follow-up question "Have you benefitted from any post-opening farm policy" (Table 5.8) finds a majority of farmers either responding negatively or taking a neutral position on the question. The government's efforts to mitigate the hardships caused by agricultural trade liberalization are not viewed in a positive light. These responses represent a fundamental discrepancy in opinions regarding what farmers demand and what the government can provide to assist farmers while

Table 5.8 Regional Differences in Satisfaction with Government Farm Policy in South Korea, 1997

Unit: percent

Total Sample N=483		Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184
Do you think the government's farm policies are consistent?	Yes	19.5	20.0	13.6
	No	56.5	51.7	69.0
X^2 =11.3 p=.02				
Have you benefitted from post-opening farm policy?	Yes	24.7	17.9	24.5
	No	45.5	46.9	49.5
X^2 =4.5 p=.34				
Have Agricultural/Livestock Cooperatives contributed to agricultural development?	Yes	29.9	22.8	17.9
	No	30.5	41.4	47.3
X^2 =11.7 p=.02				

Source: Survey Data, 1997.

remaining within GATT guidelines. The government is constrained by the GATT/WTO with respect to further direct subsidies which arguably are the most transparent and recognizable means of support.

In the same vein, government efforts to "soften" the effects of market opening through the institution of cooperatives (Table 5.8), which are designed in part to provide advantages via vertical integration of agricultural production including volume purchase of inputs and sales of product, has gained little support to date. What level of support is evident is found in more diversified Kyonggi where such programs should reasonably provide the greatest savings (29.9 percent). In contrast, 47.3 percent of farmers in Kyongbuk do not feel that the "new" cooperatives and their programs have aided development of the agricultural sector.

The topics covered in the previous tables reflect regional differences which could reasonably be ascribed to differences in the types of agricultural products, variable market access, and locational attributes. In short, the results from Tables 5.5 through 5.8 taken collectively indicate that locational characteristics of the agricultural sectors in these three provinces are more important in shaping opinions than national policies. On the other hand, when the farmers in the sample were asked directly about the influence of open markets, only one of the seven scale items reported in Table 5.9 had a statistically different score across locations. The need for the expansion of agro-industrial processing zones, most common in Kyonggi, received the greatest support in this province (46.8 percent), while Kyongbuk farmers were the least positive of this development strategy (30.4

Table 5.9 South Korean Farm Household Responses to Open Markets

Unit: percent

Total Sample N=483		Kyonggi N=154	Chunbuk N=145	Kyongbuk N=184
Open markets were inevitable	Agree	57.1	56.6	65.2
	Disagree	24.0	25.5	20.1
X^2 =3.4 p=.49				
Market opening will modernize agriculture	Agree	44.2	32.4	42.4
	Disagree	36.4	43.4	38.0
X^2 =5.1 p=.28				
Open markets help industry	Agree	52.6	60.0	60.9
	Disagree	31.2	24.1	27.2
X^2 =3.8 p=.43				
Open markets will lower income	Agree	79.9	80.0	79.3
	Disagree	8.4	4.1	7.1
X^2 =3.1 p=.54				
Better rice can be competitive with imports	Agree	38.3	34.5	30.4
	Disagree	48.1	51.7	54.3
X^2 =2.4 p=.67				
Urban Koreans benefit from price decreases due to imports	Agree	76.0	72.4	75.5
	Disagree	16.9	13.1	17.4
X^2 =7.1 p=.13				
More agro-industrial zones will help raise my income	Agree	46.8	37.9	30.4
	Disagree	33.8	39.3	56.0
X^2 =20.2 p=.0001				

Source: Survey Data, 1997.

percent in Table 5.9). While a majority of farmers believe that market opening is inevitable in view of intensifying globalization and international pressures, there is substantial disagreement on the potential influence of open markets on the "modernization" of Korean agriculture or the positive effects of open markets on the farm sector. These responses indicate that farmers recognize markets will be opened despite their protests, that most farmers expect open markets will hardly advance national interests, and that they believe open markets will eventually lower their incomes while benefitting Korea's urban consumers (items 4 and 6 in Table 5.9).

5.5 Summary

Kyonggi, Chunbuk, and Kyongbuk Provinces in South Korea were selected as the locations of the mail survey and interviews mainly on the basis of the region's economic status and agricultural structure. Informal interviews and a mail survey were employed to explore the research problems. Through initial interviews and pre-tests, the questionnaire was developed and sent to 630 farm households with 210 in each province. The total of 483 farmers in all of the three provinces participated in the survey. The scale items from the questionnaire were compiled and compared by location.

For the most part, farmers from all three provinces who participated in the survey reveal a high degree of frustration and dissatisfaction. Not only is there pessimism pertaining to existing conditions, but there is also little optimism for the future. Based on the results, it is clear that there is a "geography" to the

dissatisfaction and concerns of Korean farmers. This needs to be considered when reviewing potential solutions. The need for further diversification of agricultural production in all provinces is also indicated. Assuming that grain and fruit markets will bear the great brunt from continuing efforts to open markets, government programs designed to shift land, resources, and labor from these portions of the sector should prove to appease farmers in these areas.

CHAPTER VI
THE QUALITY OF LIFE, LABOR, AND TRADE LIBERALIZATION IN RURAL KOREA: A QUANTITATIVE ANALYSIS OF SURVEY DATA

The survey data collected represent the respondent's opinions on various rural issues and demographic information. In this chapter, the survey data are examined on the basis of the respondents' locations, types of farming, socio-demographic characteristics, and self-reported quality of life.

In Chapter V, question items were summarized and examined through cross-tabulations and the use of the chi-square statistic. This method of examining data may show a detailed nature of the relationships between the respondents' opinions and their locational, demographic, and economic characteristics, but only for one variable at a time, which involves the processing of a large volume of data. A factor analysis technique, thus, was employed to obtain a more comprehensive picture and to identify a combination of variables for subsequent statistical analyses. The composite indices were, then, calculated according to representative variables from each factor. In other words, each composite index of opinions was made of the mean value of raw scores of variables which were loaded significantly on each derived factor. These indices were, then, used to examine relationships between respondents' opinions and their location and socio-economic and demographic conditions.

In this aspect, the purpose of factor analysis in the procedure of quantitative analyses was to identify reasonable aggregation of variables for subsequent application to other statistical techniques. In fact, factor analysis was employed to

examine and corroborate *a priori* groupings of variables by associating representative variables from a large set of data for further analyses.

With regard to independent variables, the respondents' provincial affiliations, types of farming, ages, educational levels, family sizes, and degrees of satisfaction with living conditions were selected. An explanation of the criteria employed for classification of the categorical variables and the procedure of comparisons of the indices follows the discussion on factor analysis. Figure 6.1 provides a diagrammatic overview of the applied statistical methods.

6.1 Generating Indices of Opinions

All of the scale items in the questionnaire were listed according to their subject categories in order to explicate the nature of question items and to clarify their meanings to respondents. Therefore, it was anticipated that the items in an identical subject category would share the membership on the extracted factors. The result of this factor analysis indicated, to an acceptable degree, the validity of *a priori* categories of scale items.

6.1.1 Data Considerations

Variables used for factor analysis were the original data set of opinions discussed previously including a total of 27 items scored on a five-point anchored scale (Appendix A). After examining several exploratory factor solutions and screening the variables to be removed on the basis of low or incorrect loadings, a total of 16 variables in the reduced data set were included in the final factor

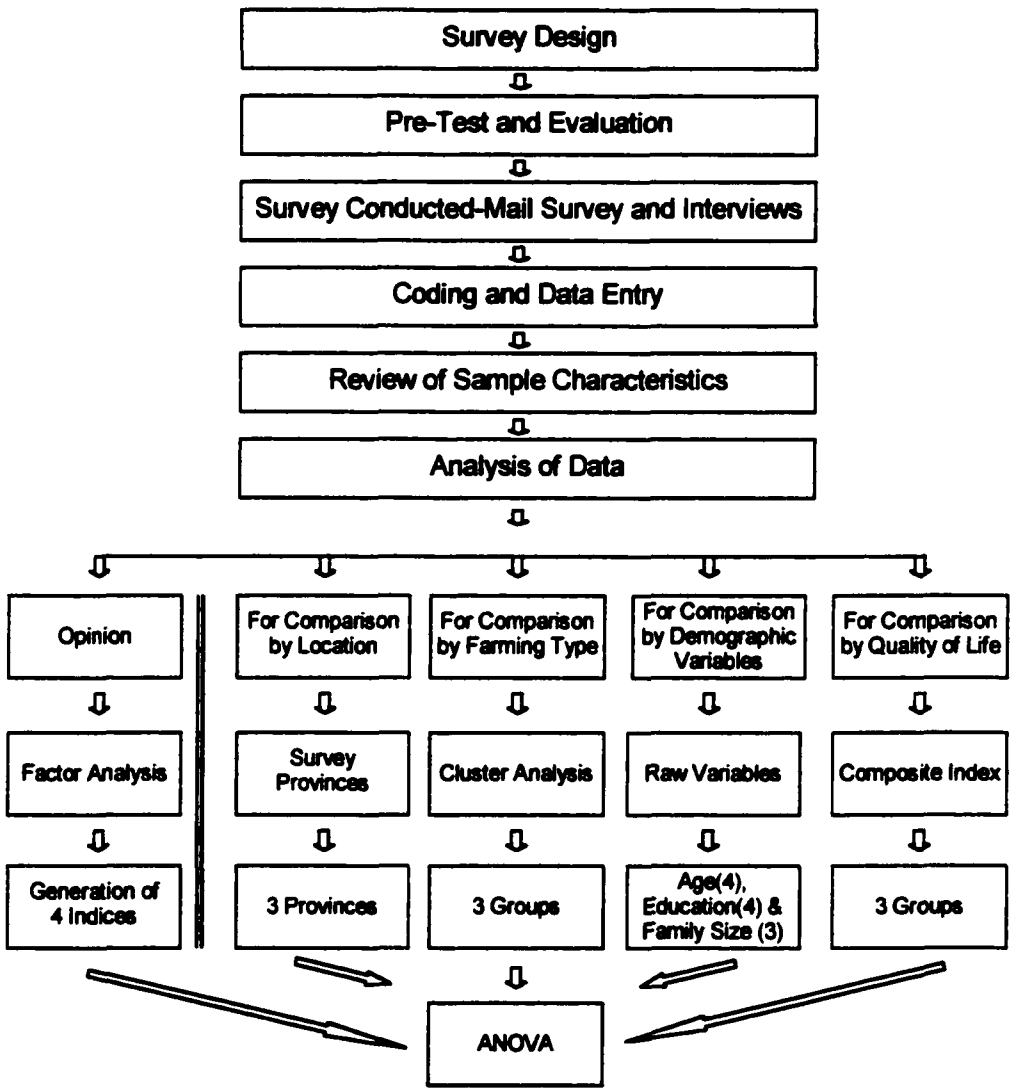

Figure 6.1 Quantitative Analysis of Survey Data

analysis solution. In the final model, the measure of sampling adequacy evaluating the appropriateness of applying a factor analysis technique was 0.747, well within the acceptable range[13]. The Bartlett test of sphericity, which examines the presence of correlations among the variables, revealed that nonzero correlations were found at the significance level of 0.0000. Thus, the variables selected were considered to satisfy the threshold of sampling adequacy (Hair et al. 1995: 393).

6.1.2 Deriving Factors

The number of factors to be extracted was based on the latent root criterion with a cutoff value of 1.0 for the eigenvalue. Thus, the four factors having eigenvalues greater than 1.0 were extracted. Then, to make factor-loading patterns easy to interpret, the varimax method of rotation of factors was used. As Table 6.1 shows, the rotation redistributed the variance, reducing the total amount of variance accounted for by the four factors. While the total percentage of variance accounted for by the initial factor solution was 53.7, the total variance by the varimax rotated factor solution was 40.3 (Table 6.1).

Factors derived from a common factor analysis procedure are based only on the common variance. This is in contrast to principal components analysis where specific and error variances are not taken into account. The rotated factor solution in this analysis indicates that the amount of unique error variance, which represent

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[13] The guidelines for the measure of sampling adequacy is as follows: .90 or above, marvelous; .80 or above, meritorious; .70 or above, middling; .60 or above, mediocre; .50 or above, miserable; and below .50 unacceptable (Hair et al. 1995: 374).

Table 6.1 Total Variance Explained in Factor Analysis

	Initial Eigenvalues			Eigenvalues After Rotation		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.459	21.620	21.620	2.585	16.157	16.157
2	2.113	13.205	34.825	1.489	9.307	25.464
3	1.743	10.897	45.722	1.285	8.029	33.493
4	1.183	7.396	53.117	1.089	6.809	40.302

the summation of both unique and error variance of all of the variables is relatively large in this data set. Unique variance here refers to the variance attended to solely a specific variance, and error variance is the variance on account of "unreliability in the data-gathering process, measurement error, or a random component of the measured phenomenon" (Hair et al. 1995: 375-376). The specific and error variance in the data set was 59.1 percent while common variance which a variable shares with all other variables in the analysis was 40.9 percent.

6.1.3 Interpreting the Factors

For the interpretation of the factor matrix, all loadings of 0.30 or above were chosen as the cutoff point for interpretation purposes. Generally, loadings of 0.30 are considered significant for sample sizes of 350 or greater. Since the sample size in this analysis was considerably more than 350 (N=483), factor loadings of 0.30 were regarded as significant (Hair et al. 1995).

Table 6.2 shows the varimax-rotated factor matrix solution. The first factor has seven significant loadings. The seven variables which significantly loaded on Factor 1 are identified as the scale items which relate to the respondents' satisfaction with rural living conditions. The second factor has four significant loadings. These variables are the question items identifying socio-economic concerns in rural areas. The third factor has three significant loadings of which variables include the items evaluating government rural policies. The fourth factor has two significant loadings. The two variables on this final factor identify

Table 6.2 Varimax-Rotated Factor Loadings

Item	Factor1	Factor 2	Factor 3	Factor 4
Factor 1: Satisfaction with Rural Living Conditions				
Q3_2 Medical Care	**.682**	-.151	.037	.020
Q3_7 Shopping Convenience	**.675**	-.077	.024	-.009
Q3_3 Cultural/Educational Facilities	**.673**	-.098	.162	-.014
Q3_5 Housing Quality	**.650**	-.104	.181	-.061
Q3_1 Transportation	**.545**	.036	.065	.049
Q3_4 Water/Sewage	**.510**	-.027	.066	-.107
Q3_6 Garbage/Sanitation	**.430**	-.007	-.038	-.027
Factor 2: Concern about Rural Labor Shortage				
Q5_1 Shortage of Labor	-.062	**.682**	.140	.126
Q5_2 Difficulty in Farming due to Aging	-.015	**.672**	.068	.040
Q4_2 Difficulty in Finding a Potential Wife	-.103	**.497**	-.043	-.008
Q4_1 Increasing Abandoned Farmsteads	-.036	**.445**	-.006	.051
Factor 3: Skepticism toward Government Policies				
Q6_1 Consistency of Gov. Policies	.062	-.053	**.715**	.006
Q6_2 Benefits of Post-Opening Policies	.108	.056	**.687**	-.076
Q6_3 Contribution of Agricultural Coops	.074	.076	**.424**	-.090
Factor 4: Concern about Agricultural Market Opening				
Q7_4 Market Opening and Income Decreases	.013	.022	-.141	**.944**
Q5_5 Effects of Market Opening	-.091	.251	-.065	**.382**

opinions about the effects of agricultural market reform. In all cases, the signs of the variables significantly loaded on each factor were positive.

After an interpretation of the significant factor loadings, each factor was named as follows: the first factor, the degree of satisfaction with living conditions; the second factor, the degree of concern about rural labor shortages; the third factor, the degree of skepticism toward government rural policies; and the fourth factor, the degree of concern about agricultural market opening (Table 6.2). Raw scores of the variables which significantly loaded on each factor were then used to generate the composite indices of opinions.

6.1.4 Generating Indices

The purpose of factor analysis, as indicated above, was to identify a reasonable combination of variables for subsequent applications in other statistical techniques. For a transferable interpretation of data in following analyses, indices of these opinion scales were calculated on the basis of the communalities of the extracted factors. In other words, indices representing the four derived factors were generated from the mean scores of the representative variables that comprised the factors (Table 6.3). Table 6.4 displays the mean value of the indices representing each factor. In addition, to evaluate the internal reliability of each set of indicators, Cronbach alphas were calculated (Table 6.4). Cronbach alpha is a measure to gauge the degree to which a set of two or more indicators share in their construct. In fact, this reliability test shows the degree of internal consistency of individual indicators

Table 6.3 Indicators of Indices

Index 1 = Mean (Q3_1, Q3_2, Q3_3, Q3_4, Q3_5, Q3_6, Q3_7)

Where Index 1: The Degree of Satisfaction with Living Conditions
- Q3_1: Transportation
- Q3_2: Medical/Health Care
- Q3_3: Cultural/Educational Facilities
- Q3_4: Water/Sewage
- Q3_5: Housing Quality
- Q3_6: Garbage/Sanitation
- Q3_7: Shopping Convenience

Index 2 = Mean (Q5_1, Q5_2, Q4_1, Q4_2)

Where Index 2: The Degree of Concern about Rural Labor Shortages
- Q5_1: Shortage of Labor
- Q5_2: Difficulty in Doing the Farming due to Aging
- Q4_1: Increasing Abandoned Farmsteads
- Q4_2: Difficulty in Finding a Potential Wife

Index 3 = Mean (Q6_1, Q6_2, Q6_3)

Where Index 3: The Degree of Skepticism toward Government Rural Policies
- Q6_1: Do you think the government's policies are consistent?
- Q6_2: Have you benefitted from the post-opening farm polices?
- Q6_3: Have Agricultural/Livestock Cooperatives contributed to agricultural development?

Index 4 = Mean (Q7_4, Q5_5)

Where Index 4: The Degree of Concern about Agricultural Market Opening
- Q7_4: Open markets will lower income.
- Q5_5: Effects of agricultural market opening

Table 6.4 Internal Consistency of Indices: Cronbach Alpha

Number of Items	N	Mean ± Std. Deviation	Cronbach Alpha
Seven Items for Index 1	483	2.6321 ± .0279	.7858
Four Items for Index 2	483	4.2702 ± .0263	.6584
Three Items for Index 3	483	2.6018 ± .0371	.6431
Two Items for Index 4	483	4.2029 ± .0299	.5429

Note: Table 6.3 lists the indicators of indices.

is in their measurement. Values of the coefficient alpha range between 0 and 1.0, with higher values implying higher reliability (Hair et al. 1995: 618). As Table 6.4 shows, the first index, which included all of the seven items about living conditions as listed in the questionnaire, yielded a coefficient alpha of 0.7858. The second set of items indicating the respondent's concern about rural labor shortages had a coefficient alpha of 0.6584. The third index showing respondents' evaluation of government rural policies had 0.6431. The two items in the fourth set, although slightly different wordings and formats were used to ask respondents to score their opinions about agricultural market opening, had a coefficient alpha of 0.5429. While a recommended threshold value for reliability is 0.70 in previous studies, low values have been considered acceptable and put to use in exploratory studies (Hair et al. 1995: 641). Coefficient alphas for the second, third, and fourth sets of items are apparently lower than the conventionally used threshold of 0.70, but these ranges were deemed acceptable for further analyses.

6.2 Hypotheses

The four indices described in the previous section were compared by criterion variables. The hypotheses were formulated in light of the discussion of the relevant theoretical concepts discussed in Chapter II and IV.

6.2.1 Effects of Location

The first set of hypotheses are based on the respondent's provincial affiliation. The discussion of regionalism in Chapter IV pointed out that the regional political sectarianism in contemporary South Korea brought about deep

social cleavages between Cholla Provinces (the southwest) and Kyongsang Provinces (the southeast). In major elections, politicians have exploited local allegiances to achieve and perpetuate power. Regional enmity between the southwest and the southeast is considered an important socio-cultural factor affecting the regional identities in both regions. In addition to the political setting, the region's level of economic development and economic structure are presumed to contribute to differences in opinions. Thus, it is hypothesized that the respondents show different responses by their location. Unique regional cultures may also lead to differences in the respondents' attitudes towards government policies including the opening of agricultural markets, their concerns about rural socio-economic issues, and their perceived well-being. The first set of alternate hypotheses are formulated as follows.

> **H1**: (H1-1) Index 1, the degree of satisfaction with living conditions, differs by location.; (H1-2) Index 2, the degree of skepticism toward government rural policies, differs by location.; (H1-3) Index 3, the degree of concern about rural labor shortages, differs by location.; and (H1-4) Index 4, the degree of concern about agricultural market opening, differs by location.

6.2.2 Effects of Types of Farming

Production, operational, and social attributes of agriculture differ by different kinds of crops and livestock (Grigg 1995: 3). Rice farmers' use of labor and capital inputs, for instance, is different from that of apple growers. The functions of the market, which are based on elasticity of demand for food, consumers' preferences, and the substitutability of food items through trades, are different by types of crops and livestock. Likewise, the availability and extent of

government subsidies and the effects of the market opening also vary by farming types. The four indices of opinions, thus, are presupposed to be different according to types of farming. In this study, a data set on percentages of agricultural incomes by different crop types, a percentage of land in ownership, and a debt to income ratio were used to classify respondents' types of farming. The procedure of classification is explained in section 6.3. The second set of alternate hypotheses are established as follows.

> **H2**: (H2-1) Index 1, the degree of satisfaction with living conditions, differs by the respondents' types of farming.; (H2-2) Index 2, the degree of skepticism toward government rural policies, differs by the respondents' types of farming.; (H2-3) Index 3, the degree of concern about rural labor shortages, differs by the respondents' types of farming.; and (H2-4) Index 4, the degree of concern about agricultural market opening, differs by the respondents' types of farming.

6.2.3 Effects of Socio-demographic Variables: Age, Education, and Family Size

Demographic variables can be utilized to differentiate a tendency or predisposition for a person to behave in a certain manner in different situations (Books et al. 1991). In general, cohort analysis including age groups, stages in life cycle, and lifestyle features are utilized to reveal broad associations in access to socio-economic resources and information (Johnston et al. 1994). It has been recognized that the life-cycle stages are associated with different efficiency levels of farm production and accordingly "entry" and "exit" processes of a farming career (Gyawu and Nelson 1988b). Several studies indicate that the life-cycle pattern is a significant factor to influence farm expansion in earlier stages and farm reduction in later stages of the farmer's career (see Gyawu and Nelson 1988b and

Kanel 1963). In this study, it is presumed that the life-cycle stages represented by the farmer's age and family size have an effect on the respondents' perceptions of government policies and rural concerns. Aged farmers are expected to be more conservative but more receptive to government policies than young farmers due to their commitment to farming and the limitations of their qualifying factors in pursuing alternative employment. The diminishing family labor force as children leave the household is also assumed to have an effect on the issue of labor shortages.

Moreover, previous studies indicate that education can be associated with the farmer's use of public and private sources of information in the decision-making process. For instance, it has been suggested that schooling can be regarded as a substitute for agricultural extension (Gyawu and Nelson 1988a). Thus, in addition to the farmer's age and family size, education is employed as another criterion variable which is assumed to influence a farmer's perception and behavioral tendency. In this respect, presumably, samples with different demographic characteristics will have different effects on one's perceptions of social and economic changes. The third sets of alternate hypotheses test relationships between the indices and these demographic variables.

> **H3-1**: (H3-1-1) Index 1, the degree of satisfaction with living conditions, differs by the respondents' ages.; (H3-1-2) Index 2, the degree of skepticism toward government rural policies, differs by the respondents' ages.; (H3-1-3) Index 3, the degree of concern about rural labor shortages, differs by the respondents' ages.; and (H3-1-4) Index 4, the degree of concern about agricultural market opening, differs by the respondents' ages.

H3-2: (H3-2-1) Index 1, the degree of satisfaction with living conditions, differs by the respondents' levels of education.; (H3-2-2) Index 2, the degree of skepticism toward government rural policies, differs by the respondent's levels of education.; (H3-2-3) Index 3, the degree of concern about rural labor shortages, differs by the respondents' levels of education.; and (H3-2-4) Index 4, the degree of concern about agricultural market opening, differs by the respondents' levels of education.

H3-3: (H3-3-1) Index 1, the degree of satisfaction with living conditions, differs by the respondents' family sizes.; (H3-3-2) Index 2, the degree of skepticism toward government rural policies, differs by the respondents' family sizes.; (H3-3-3) Index 3, the degree of concern about rural labor shortages, differs by the respondents' family sizes.; and (H3-3-4) Index 4, the degree of concern about agricultural market opening, differs by the respondents' family sizes.

6.2.4 Effects of the Quality of Life Indicator

It is presumed that the indicator of self-reported quality of life can also suggest differences in respondents' attitudes towards rural policies and socio-economic issues. Thus, Index 1, representing the degree of the respondent's satisfaction with current living conditions, was utilized as a criterion variable. In general, subjective indicators are a critical element which needs to be considered in the policy-making process (Carley 1980). Residents in rural areas with a lack of infrastructure, such as limited access to roads, health care, or cultural and educational opportunities, are more prone to have alienated attitudes toward government policies. It is likely that the lower the quality of living the farmers are experiencing, the lower their evaluation of policies. The fourth set of alternate hypotheses examines this relationship.

H4: (H4-1) Index 2, the degree of skepticism toward government rural policies, differs by the degrees of the respondents' satisfaction with living conditions.; (H4-2) Index 3, the degree of concern about rural labor

shortages, differs by the degrees of the respondents' satisfaction with living conditions.; and (H4-3) Index 4, the degree of concern about agricultural market opening, differs by the degrees of the respondents' satisfaction with living conditions.

6.3 Independent Variables

As outlined above, the indices of opinions generated through factor analysis are compared by the respondents' locations, types of farming, demographic characteristics, and self-reported quality of life. This section describes the criteria employed to categorize these variables.

6.3.1 Locational Variable: The Survey Provinces

In order to compare regional differences of opinions, respondents' provincial affiliation was employed as a locational variable. Provinces of the survey locations were coded 1 to 3, with Kyonggi Province being 1, Chunbuk Province being 2, and Kyongbuk Province being 3.

6.3.2 Economic Variable: Types of Farming

Respondents were classified into three groups on the basis of their income structure. Cluster analysis techniques including both hierarchical and nonhierarchical methods were applied to classify different types of farming according to their income structure.

6.3.2.1 Data and Methods of Classification

The purpose of cluster analysis was to segment respondents into groups with similar income structure. Table 6.5 shows the seven variables used in cluster analysis. For the method of cluster analysis, hierarchical and non-hierarchical

Table 6.5 Variables in Cluster Analysis

Variable	Mean ± Std. Deviation	N
Rice: Percentage of Income from Rice Cultivation in Total Agricultural Income	37.1121 ± 32.7410	483
Field: Percentage of Income from Field-Crop Cultivation in Total Agricultural Income	27.4391 ± 30.3634	483
Orchard: Percentage of Income from Orchard-Crop Cultivation in Total Agricultural Income	22.5884 ± 34.2030	483
Livestock: Percentage of Income from Livestock Farming in Total Agricultural Income	10.1206 ± 21.5413	483
Other: Percentage of Income from Other-Crop Cultivation in Total Agricultural Income	2.7397 ± 10.8067	483
Ag Income: Percentage of Agricultural Income in Total Household Income	86.3608 ± 21.5530	483
Land: Percentage of Owned Land in Total Land Cultivated by the Household	80.1017 ± 26.0725	483
Liability: Debt to Income Ratio	96.7626 ± 10.7849	483

procedures in combination were employed. As a first step, hierarchical cluster analysis with Ward's method was employed to identify the appropriate number of clusters and to generate seed points for a non-hierarchical procedure. After an examination of several exploratory cluster solutions, the three-cluster solution was chosen as the best fit for the seven variables. As a second step, a nonhierarchical method was applied to "fine-tune" the results from the hierarchical technique (Hair et al. 1995: 453).

Table 6.6 shows initial cluster centers obtained from the results of hierarchical cluster analysis. These initial cluster centers, then, were used as the seed points in the nonhierarchical cluster analysis. The final cluster centers resulted from nonhierarchical cluster analysis are also shown in Table 6.6.

6.3.2.2 Interpretation of the Clusters

Table 6.7 provides the mean value of each of the seven variables, the univariate F ratios, and levels of significance. The levels of significance for the seven variables disclose that the variable indicating the percentage of income from cultivating other crops in the total agricultural income was not significantly different among the three groups. This variable, therefore, was excluded in interpreting the clusters. The group means of the six significant variables were used to name the clusters. Of the total 483 respondents, 137 (28.4 percent) were classified into the first cluster, 216 (44.7 percent) into the second cluster, and 130 (26.9 percent) into the third cluster.

Table 6.6 Initial and Final Cluster Centers in Nonhierarchical Cluster Analysis

	Initial Cluster Centers			Final Cluster Centers		
Variable	1	2	3	1	2	3
Rice	.77472	-.44380	-.75584	1.14234	-.26513	-.76333
Field	-.42338	1.13100	-.46244	-.33375	.56599	-.58869
Orchard	-.58089	-.53986	1.42665	-.60323	-.52738	1.51199
Livestock	.43114	-.31431	-.35429	-.34640	.43729	-.36152
Other	.17847	.50201	-.21981	.07650	.01051	.09809
Ag Income	.17372	-.13242	.39804	-.81681	.26951	.41299
Land	.09560	-.26004	.40346	.11901	-.36781	.48570
Liability	.20288	.27208	.04440	-.32845	.18250	.04291

Notes: Rice- % Income from Rice Cultivation in Total Ag. Income
Field- % Income from Field-Crop Cultivation in Total Ag. Income
Orchard- % Income from Orchard-Crop Cultivation in Total Ag. Income
Livestock- % Income from Livestock Farming in Total Ag. Income
Other- % Income from Other-Crop Cultivation in Total Ag. Income
Ag Income-% Agricultural Income in Total Household Income
Land- % Owned Land in Total Cultivated Land
Liability- % Debt to Income Ratio

Table 6.7 Group Means and Significance Levels for Three Clusters

	Group Means				
	Cluster 1	Cluster 2	Cluster3	F ratio	Significance
Rice	74.5136	28.4315	12.1201	304.913	.000
Field	17.3053	44.6245	9.5645	88.177	.000
Orchard	1.9560	4.5503	74.3029	1304.941	.000
Livestock	2.6586	19.5405	2.3329	44.041	.000
Other	3.5664	2.8533	1.6797	1.038	.355
Ag Income	68.7562	92.1695	95.2620	87.951	.000
Land	83.2046	70.5121	92.7652	35.317	.000
Liability	61.3394	116.4448	101.3906	11.595	.000

Notes: Rice- % Income from Rice Cultivation in Total Ag. Income
Field- % Income from Field-Crop Cultivation in Total Ag. Income
Orchard- % Income from Orchard-Crop Cultivation in Total Ag. Income
Livestock- % Income from Livestock Farming in Total Ag. Income
Other- % Income from Other-Crop Cultivation in Total Ag. Income
Ag Income-% Agricultural Income in Total Household Income
Land- % Owned Land in Total Cultivated Land
Liability- % Debt to Income Ratio

Cluster 1 indicates the characteristics of rice farm households (Table 6.7). This group of farmers grows almost exclusively rice, while earning on average about 30 percent of their total household income outside of farming. In line with the initial survey design which included only full-time farmers and part-time farmers whose agricultural income is more than a half of their total income, the non-farm income of this group is on average below 50 percent. In addition, it is shown that this group leases only a small portion of their farmland (16.8 %). These farmers also have a relatively low level of debt accounting for approximately two thirds of their total household income. Cluster 1, thus, was named as "rice farming households."

The households in Cluster 2 can be called "mixed livestock and field-crop farming households" (Table 6.7). This second group of farmers cultivates field crops while growing livestock. This group represents full-time farmers deriving only a small proportion of their income from non-agricultural sources. The farmers in this group cultivate the smallest proportion of "owned" (70 percent) versus "rented" farmland (30 percent) among the three groups. Moreover, this group has the highest debt to income ratio. The debt to income ratio of this group is on average around 120 percent (with debt outpacing income by 20 percent). Given large areas of rented farmland and sunk investments in the facilities necessary for livestock and greenhouse farming, it is no surprise that these farmers require a large amount of cash through loans.

The households in Cluster 3 may be called "orchard farming households" (Table 6.7). The farmers in Cluster 3 draw their income exclusively from orchard crops. This group has the highest proportion of owned farmland although admittedly it is lower quality farmland than that farmland by the households in Clusters 1 and 2. In terms of the debt to income ratio, these farmers reported almost the same amount of debt as their annual total household income, placing them in the middle of the other two clusters. Hence, Cluster 3 was named as orchard farming households. These three groups were then used as a criterion variable to determine whether opinions differ by types of farming.

Table 6.8 contains the distribution of types of farming in the survey sample. Rice farming households are concentrated in Chunbuk (49.6 percent) and Kyonggi (38.7 percent) samples while orchard farming is found almost exclusively in Kyongbuk (73.1 percent) mostly for topographic reasons. In comparison, mixed farming households are evenly distributed across the three survey provinces. This generally conforms with Korean national statistics.

6.3.3 Socio-demographic Variables: Age, Education, and Family Size

The respondent's age, education, and family size were taken as demographic grouping variables. The criteria adopted for categorizing these variables are explained in this section.

Table 6.8 Distribution of Types of Farming in the Survey Sample, 1997

	Province					
	Kyonggi	Chunbuk	Kyongbuk	Total	x^2	Sig.
Total	154 (100%)	145 (100%)	184 (100%)	483 (100%)	118.752	.000
Rice Farming	53 (38.7%)	68 (49.6%)	16 (11.7%)	137 (100%)		
Mixed Farming	73 (33.8%)	70 (32.4%)	73 (33.8%)	216 (100%)		
Orchard Farming	28 (21.5%)	7 (5.4%)	95 (73.1%)	130 (100%)		

Source: Survey Data, 1997.

6.3.3.1 Age

The respondent's age was categorized into four groups to compare the opinion indices. In the survey sample, a majority of farmers (67.4 percent) were in their 40's or 50's. The farmers in their 20's or 30's accounted for only 12 percent. The opinions of the elderly groups (older than 50 years of age), as indicated in the previous section, are assumed to be more in concert with rural policies than those of the young groups. Categorical values for age are 1 for below 39 years of age, 2 for 40 to 49 years of age, 3 for 50 to 59 years of age, and 4 for over 60 years of age.

6.3.3.2 Level of Education

The number of farmers with college education was only 5.8 percent in the survey sample. Most farmers (76.4 percent) indicated that they had middle or high school level of education. The educational level may have different effects on the farmers' demand for and use of information in their decision making. Respondents' educational levels were coded as follows: 1 for no formal education or primary school education, 2 for middle school education, 3 for high school education, and 4 for college education or higher.

6.3.3.3 Family Size

In the questionnaire, respondents were asked to provide demographic information only on family members who currently reside together in their households. As described earlier, the terms "family" and "household" are interchangeably used in this study. The percentage of farm households which consist of only two family members was 21.7 percent in the sample. The so-called

"empty nesters" are assumed to suffer more from labor shortages than a large family. Family size was categorized as follows: 1 represents two family members, 2 represents three to four family members, and 3 represents large families with five members or more.

6.3.4 The Quality of Life Indicator

Index 1 indicating the degree of satisfaction with living conditions was also categorized into three groups: 1 for a high level of dissatisfaction (below 2.4286), 2 for a medium level of dissatisfaction (2.428 to 2.8571), and 3 for a low level of dissatisfaction (over 2.8572). The higher level of dissatisfaction with the quality of life is assumed to be associated with the high degree of discontentment with government policies.

6.4 Identifying Differences of Groups

This section describes the results of a statistical analysis conducted to determine whether the four indices are different according to the respondents' locations, types of farming, ages, education levels, family sizes, and degrees of satisfaction with current living conditions.

6.4.1 Methods of Analysis

The univariate test procedures of Analysis of Variance (ANOVA) was used to compare the four indices of opinions by the criterion variables. ANOVA requires that the dependent variable is normally distributed and that variances are equal for all groups. ANOVA is known to be robust regarding the violation of normality of data if a sample size is large. Likewise, the test is tolerant with the violation of

equal variances if the largest group size divided by the smallest group size is less than 1.5 (Hair et al. 1995: 275).

Thus, variables were examined through the Kolmogorov-Smirnov test for detection of departure from normality and the Levene statistic for detection of heteroscedasticity. These tests have disclosed that some of the dependent measures in this study do not meet the assumptions of normality and equality of variances for the treatment groups. Nonnormal distributions, nevertheless, were regarded acceptable in an analysis of variance since a large sample size offsets the effects of deviation from normal distribution of data.

With respect to homogeneity of variances, Table 6.9 exhibits the results of the Levene test for each of the criterion variables. As shown in Table 6.9, Index 1 and Index 2 reveal significant heterogeneity ($p \leq .05$) of variances on the criterion variables "location" and "types of farming" respectively. However, in case of Index 1 on the criterion variable "location," where the ratio of the largest group size to the smallest group size is less than 1.5, the use of ANOVA was considered appropriate. Regarding the problem of heteroscedasticity for Index 2 in relation to the variable "types of farming" (Table 6.9), it was decided that ANOVA should not be used due to the large differences of group sizes. Therefore, as an alternative method, the Kruskal-Wallis test, a nonparametric equivalent to one-way ANOVA, was selected to examine Index 2 by types of farming. In the Kruskal-Wallis test, interval or ratio scale data are recoded into ranks to avoid problems related to nonnormality and unequal variances. This nonparametric test statistic is derived from a set of rank

Table 6.9 Significance Levels of the Levene Test for Detection of Homogeneity of Variances

	Index 1	Index 2	Index 3	Index 4
Location	.025*	.125	.167	.062
Types of Farming	.094	.008*	.545	.945
Age	.115	.062	.152	.691
Education	.073	.254	.474	.876
Family Size	.862	.143	.440	.515
Satisfaction	-	.125	.762	.977

Note: *Significant at $p \leq .05$

sums after the data are ordered over all observations. In case where all groups are greater than 5, however, the test statistic is treated as the chi-square statistic (Shaw and Wheeler 1985: 141). Therefore, the statistic for comparison of Index 2 by the categorical variable "types of farming" is the chi-square statistic. The other dependent variables, despite dissimilar sizes of groups, were found to have equal variances for all of the categorical variables (Table 6.9).

Once it was determined that differences exist among the means of groups, the data were reanalyzed using post hoc tests to determine which means were significantly different. In multiple comparisons, two different kinds of tests were performed. When the variances are not equal, Tamhane's T2 test, which is a conservative pairwise comparisons test, was performed. For homogeneous variances, Scheffe's test, which is the most conservative with respect to Type I error, was used. All of the test statistics were considered significant if the probability of a random result was less than 5 percent ($p \leq .05$).

6.4.2 Interpretation of ANOVA Results

The following tables report the results of analysis of variance (and the Kruskal-Wallis test in the case of comparison of Index 2 by types of farming). The mean values can be placed in context by locating them on a range of values from 1 for the lowest to 5 for the highest (Appendix A). As the mean values of the Indices increase, the respondents' satisfaction with living conditions and concerns pertaining to rural labor issues increase, while their skepticism toward government policies and concerns about the opening of markets decrease.

6.4.2.1 Differences by Location

The grand mean score on Index 1, the degree of satisfaction with living conditions, was 2.6321 $\pm$ .6137, implying a moderate degree of dissatisfaction (Table 6.10). Indicators of the quality of living conditions included satisfaction with transportation, medical care, cultural/educational facilities, water/sewage quality, housing quality, garbage/sanitation, and shopping convenience. The overall dissatisfaction with the current quality of life was fairly explicit in the survey sample as discussed in the previous analysis using the chi-square statistic (Chapter V). Further, the results of the post hoc test were also consistent with the previous findings. The test results indicate that Chunbuk farmers in the survey have a higher level of discontent than Kyonggi farmers. This again reflects the underdeveloped and neglected state of most types of infrastructure in the southwest region, which in turn suggest lagging regional economic conditions. In comparison, Kyonggi respondents, showing a lesser degree of dissatisfaction, have an easy access to high-order services and goods, especially regarding medical care and cultural/educational facilities, not only in the region itself but also in the capital city of Seoul.

The grand mean score on Index 2 representing the degree of concern about the problems resulting from rural labor shortages was 4.2702 $\pm$ .5784, reflecting a very high degree of concern (Table 6.10). The indicators of this index show how important such issues as shortages of labor, difficulty in doing the farming due to aging, increasing abandoned farmsteads, and difficulty in finding a potential wife

Table 6.10 Comparisons of Indices by Location

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 1 Satisfaction with Living Conditions					
Location	483	2.6321 ± .6137	4.135*	.017	(1&2)
1) Kyonggi Province	154	2.7310 ± .5488			
2) Chunbuk Province	145	2.5281 ± .6870			
3) Kyongbuk Province	184	2.6312 ± .5933			
Index 2 Concern about Labor Shortages					
Location	483	4.2702 ± .5784	9.481*	.000	(1&2, 1&3)
1) Kyonggi Province	154	4.1088 ± .5988			
2) Chunbuk Province	145	4.3155 ± .6074			
3) Kyongbuk Province	184	4.3696 ± .5074			
Index 3 Skepticism toward Government Policies					
Location	483	2.6018 ± .8150	3.653*	.027	(1&3)
1) Kyonggi Province	154	2.7338 ± .8309			
2) Chunbuk Province	145	2.5977 ± .8534			
3) Kyongbuk Province	184	2.4946 ± .7571			
Index 4 Concern about Agricultural Market Opening					
Location	483	4.2029 ± .6563	1.188	.306	
1) Kyonggi Province	154	4.1818 ± .7227			
2) Chunbuk Province	145	4.2724 ± .5951			
3) Kyongbuk Province	184	4.1658 ± .6431			

Note: *Significant at $p \leq .05$

are in the respondent's economic and social standing. Locational differences were statistically significant, with Kyongbuk and Chunbuk respondents expressing greater concerns than Kyonggi farmers. Again, Kyonggi farmers, who benefit from their proximity to the capital, the largest urban service center, seem to be in a better situation regarding available labor than farmers in the other provinces.

Negative perceptions of government policies were also notable among the farmers participating in the survey. The total mean score of Index 3 indicating the degree of skepticism toward government policies was 2.6018 $\pm$ .8150, implying disapproval of current policy directions (Table 6.10). The indicators of this index included: "Do you think the government's policies are consistent?"; "Have you benefitted from the post-opening farm polices?"; and "Have Agricultural/Livestock Cooperatives contributed to agricultural development?" With this set of questions, the respondents from Kyongbuk Province registered a lower score than Kyonggi farmers. A high degree of disapproval of government efforts by Kyongbuk farmers is noteworthy in that this southeast region along with Kyongnam Province had been historically associated with the government ruling party until the last presidential election in December 1997. Despite this perception of political association, the respondents in Kyongbuk Province appear to be more discontent with government policies than the other respondents.

When asked about the effects of the opening of agricultural markets, the respondents expressed a high degree of concern (4.2029 $\pm$ .6563). Unlike the previous three composite indices of measurements, this index was not significantly

different across provinces (Table 6.10). All of the farmers in the survey regarded that continuing agricultural market opening is an important factor in their economic problems, negatively affecting their incomes. Without any locational differences, the farmers incorporated in the survey have indicated that they consider the liberalization of agricultural markets as a source of great anxiety. Clearly, the respondents perceive that the introduction of cheaper produce from abroad is taking a toll on their incomes, making them ever more pessimistic about the future.

6.4.2.2 Differences by Types of Farming

The indices were compared according to the three types of farming: rice, mixed, and orchard farming households. Indices 1, 3, and 4 were not significantly different by types of farming. However, with respect to Index 2, it was indicated that the mixed farming households in the survey were most concerned about issues related to labor shortages while rice farming households registered the lowest score (Table 6.11). Given the fact that orchard farming and mixed farming combined with field crops and livestock are comparatively more labor intensive than rice cultivation, it is rather obvious that differences in labor inputs contribute to differences in the respondents' concerns about the needs for labor. Further, this labor-intensive work prevents these groups of farmers from seeking non-farm jobs, which also leaves them more dependent on revenues from agriculture.

As described in the discussion of the results of cluster analysis, the respondents of mixed farming based on livestock and field-crop cultivation have the highest debt to income ratio and the highest proportion of rented farmland

Table 6.11 Comparisons of Indices by Types of Farming

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 1 Satisfaction with Living Conditions					
Types of Farming	483	2.6321 ± .6137	.480	.619	
1) Rice Farming	137	2.6715 ± .6273			
2) Mixed Farming	216	2.6058 ± .6381			
3) Orchard Farming	130	2.6341 ± .5577			
Index 2 Concern about Labor Shortages(chi-square)**					
Types of Farming	483	4.2702 ± .5784	7.605*	.022	
1) Rice Farming	137	4.1369 ± .6558			
2) Mixed Farming	216	4.3137 ± .5501			
3) Orchard Farming	130	4.3385 ± .5151			
Index 3 Skepticism toward Government Policies					
Types of Farming	483	2.6018 ± .8150	.070	.933	
1) Rice Farming	137	2.6156 ± .7848			
2) Mixed Farming	216	2.5864 ± .8388			
3) Orchard Farming	130	2.6128 ± .8121			
Index 4 Concern about Agricultural Market Opening					
Types of Farming	483	4.2029 ± .6563	.857	.425	
1) Rice Farming	137	4.2263 ± .6530			
2) Mixed Farming	216	4.2269 ± .6484			
3) Orchard Farming	130	4.1385 ± .6735			

Notes: *Significant at $p \leq .05$
** For comparison of Index 2 by types of farming, the Kruskal-Wallis test was used.

among the three groups. This indicates that this group of farmers in the survey is currently the most financially distressed and is prone to more disruption in their household economy due to rising labor costs. In this regard, livestock and field-crop producers as well as orchard farmers, due to high demand for intensive labor inputs in farming practices, are expected to suffer more seriously from insufficient labor supply than rice growers.

6.4.2.3 Differences by Socio-demographic Variables: Age, Education, and Family Size

Comparisons of the indices by a set of demographic variables also disclosed some dissimilar features (Table 6.12, 6.13, and 6.14). As Table 6.12 displays, Index 3, indicating the degree of skepticism toward government policies, alone was significantly different by age groups ($F= 5.637$, $p=.001$). Of interest, the farmers in their 40's were shown to be more pessimistic about government policies than the older farmers. Farmers in their 60's or older were least disapproving of government programs. As suggested earlier, elderly farmers seemed to be more responsive to government policies than young farmers despite the fact that they were being excluded from the post-Uruguay Round rural support programs. In contrast, younger farmers appear to be outspoken about government policies and programs in spite of comparatively large benefits from the government supports.

With regard to the categorical variable of the farmers' levels of education, the opinion indices were not found to be significantly different in this survey sample (Table 6.13). However, the comparison of indices by the family size

Table 6.12 Comparisons of Indices by Age Groups

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 1 Satisfaction with Living Conditions					
Age	483	2.6321 ± .6137	1.663	.174	
1) 30's or Younger	59	2.5230 ± .7136			
2) 40's	176	2.5974 ± .5927			
3) 50's	150	2.6533 ± .6180			
4) 60's or Older	98	2.7274 ± .5722			
Index 2 Concern about Labor Shortages					
Age	483	4.2702 ± .5784	2.355	.071	
1) 30's or Younger	59	4.3347 ± .5640			
2) 40's	176	4.1832 ± .6360			
3) 50's	150	4.2917 ± .5627			
4) 60's or Older	98	4.3546 ± .4815			
Index 3 Skepticism toward Government Policies					
Age	483	2.6018 ± .8150	5.637*	.001	(2&3, 2&4)
1) 30's or Younger	59	2.5593 ± .8199			
2) 40's	176	2.4223 ± .7443			
3) 50's	150	2.7044 ± .8377			
4) 60's or Older	98	2.7925 ± .8421			
Index 4 Concern about Agricultural Market Opening					
Age	483	4.2029 ± .6563	.280	.840	
1) 30's or Younger	59	4.1949 ± .6949			
2) 40's	176	4.1818 ± .6663			
3) 50's	150	4.2433 ± .6391			
4) 60's or Older	98	4.1837 ± .6477			

Note: *Significant at $p \leq .05$

Table 6.13 Comparisons of Indices by Educational Level

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 1 Satisfaction with Living Conditions					
Educational Level	483	2.6321 ± .6137	.115	.951	
1) No or Primary Sch.	86	2.6561 ± .6594			
2) Middle School	185	2.6201 ± .6387			
3) High School	184	2.6390 ± .5929			
4) College or Higher	28	2.5918 ± .4342			
Index 2 Concern about Labor Shortages					
Educational Level	483	4.2702 ± .5784	.085	.968	
1) No or Primary Sch.	86	4.2965 ± .5524			
2) Middle School	185	4.2635 ± .6155			
3) High School	184	4.2622 ± .5734			
4) College or Higher	28	4.2857 ± .4447			
Index 3 Skepticism toward Government Policies					
Educational Level	483	2.6018 ± .8150	2.475	.061	
1) No or Primary Sch.	86	2.7984 ± .7537			
2) Middle School	185	2.5910 ± .8284			
3) High School	184	2.5127 ± .7953			
4) College or Higher	28	2.6548 ± .9622			
Index 4 Concern about Agricultural Market Opening					
Educational Level	483	4.2029 ± .6563	2.353	.071	
1) No or Primary Sch.	86	4.0756 ± .7051			
2) Middle School	185	4.2919 ± .6244			
3) High School	184	4.1739 ± .6630			
4) College or Higher	28	4.1964 ± .6137			

Note: *Significant at $p \leq .05$

Table 6.14 Comparisons of Indices by Family Size

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 1 Satisfaction with Living Conditions					
Family Size	483	2.6321 ± .6137	1.527	.218	
1) 2	105	2.7020 ± .6164			
2) 3 or 4	203	2.5792 ± .6271			
3) 5 or More	175	2.6514 ± .5943			
Index 2 Concern about Labor Shortages					
Family Size	483	4.2702 ± .5784	5.845*	.003	(1&3)
1) 2	105	4.4071 ± .5086			
2) 3 or 4	203	4.2869 ± .5758			
3) 5 or More	175	4.1686 ± .6042			
Index 3 Skepticism toward Government Policies					
Family Size	483	2.6018 ± .8150	1.810	.165	
1) 2	105	2.7206 ± .8283			
2) 3 or 4	203	2.6026 ± .7720			
3) 5 or More	175	2.5295 ± .8511			
Index 4 Concern about Agricultural Market Opening					
Family Size	483	4.2029 ± .6563	.180	.835	
1) 2	105	4.1810 ± .6509			
2) 3 or 4	203	4.1946 ± .6824			
3) 5 or More	175	4.2257 ± .6312			

Note: *Significant at $p \leq .05$

revealed differences in opinion on labor issues (Table 6.14). It does not come as a surprise that households with a large number of family members are less concerned with labor issues than a small family. Farm households which consist only of a couple whose children are assumed to have left the household composed about one fifth of the sample population. In consideration of the older ages of these respondents, it is apparent that this group of "empty nesters" is experiencing hardships in having sufficient agricultural labor force but also in doing an exacting job themselves.

6.4.2.4 Differences by the Quality of Life Indicator

As Table 6.15 shows, Index 2 which implicates the major socio-economic issues related to the declining availability of farm labor was statistically different when compared to the three categories of respondents based on their satisfaction with living conditions ($F=7.617$, $p=.001$). The high dissatisfaction group had a lower score on Index 2 than the medium dissatisfaction group, indicating a higher degree of concern about the declining agricultural labor force. The perceived decline in the quality of life in rural Korea, as described earlier, is an element which fosters increased migration. This in turn gives rise to a multitude of problems related to rural depopulation and urban overcrowding. Sparsely populated rural areas do not provide a sufficient amount of threshold of demand for higher-order services. A lack of service providers and amenities as well as the still underdeveloped infrastructure are all aspects of rural life influencing outmigration, which results in the declining agricultural work force.

Table 6.15 Comparisons of Indices by Self-Reported Quality of Life

	N	Mean ± St.Deviation	F	Sig.	Sig.Different Group in Pairwise Comparison
Index 2 Concern about Labor Shortages					
Quality of Life	483	4.2702 ± .5784	7.617*	.001	(1&2)
1) High Dissatisfaction	188	4.3750 ± .5283			
2) Medium Dissatis.	139	4.1259 ± .6316			
3) Low Dissatisfaction	156	4.2724 ± .5625			
Index 3 Skepticism toward Government Policies					
Quality of Life	483	2.6018 ± .8150	10.150*	.000	(1&3)
1) High Dissatisfaction	188	2.4238 ± .8234			
2) Medium Dissatis.	139	2.6043 ± .7662			
3) Low Dissatisfaction	156	2.8141 ± .8008			
Index 4 Concern about Agricultural Market Opening					
Quality of Life	483	4.2029 ± .6563	2.266	.105	
1) High Dissatisfaction	188	4.2819 ± .6482			
2) Medium Dissatis.	139	4.1439 ± .6655			
3) Low Dissatisfaction	156	4.1603 ± .6525			

Note: *Significant at $p \leq .05$

Further, Index 3 representing the skepticism toward government agricultural policies was also shown to be statistically different when compared to the degree of satisfaction with the quality of life (F=10.150, p=.000). The post hoc analysis showed that the respondents reporting low dissatisfaction registered a lower score on Index 3 than those with a high level of dissatisfaction. In other words, a pessimistic view of state policies and low political trust are evident in the "high dissatisfaction" group. It is no doubt that the respondents in this high dissatisfaction group believe that they are not properly supported by government agencies such as the agricultural cooperatives and rural aid programs.

As in comparisons with the other sets of independent variables, the concern about the opening of agricultural markets did not differ when compared across groups with varying levels of satisfaction with their living conditions.

6.5 Discussion: A Composite Summary of Results

The evaluation of hypotheses are presented in Appendix F. The locational comparisons have indicated that Kyonggi farmers express a lower degree of concerns about various rural issues than those in the other two provinces in the survey. Respondents from Chunbuk and Kyongbuk Provinces are more distressed by low quality of living and more disenchanted with state policies than Kyonggi farmers. Partly owing to rapidly spreading urbanization, rising land values, and the locational advantages resulting from easy access to resources and services in Seoul, Kyonggi farmers in the survey seem buffered from many of the adversities facing the rural economy in other areas. Moreover, the regionalism hypothesized to

distinguish Cholla Province from the other more prosperous areas appears to have little influence on farmers' attitudes. What differentiates the level of concerns about rural socio-economic issues is found between relatively affluent and diversified Kyonggi Province and the other regions. In spite of these regional differences, farmers in the survey showed an equally high degree, across the board, of apprehension about their future situation.

Cluster analysis, which was used to classify types of farming, has revealed that currently, the economic viability of livestock and field crop producers is far more fragile than that of rice farmers mainly due to a high demand for intensive labor inputs, a large amount of fiscal liabilities, a high percentage of tenant farming, and an increased competition with imported products. Comparisons of the four indices indicate that mixed and orchard farming households are more affected by the declining rural population and farm labor force than rice farmers. In addition to rising labor costs, increasing imports of livestock products, especially beef and chicken, and seasonal/yearly fluctuations of yields and prices of crops have squeezed profit margins of mixed farmers. This denotes a pressing need for a relief from their economic distress. Unfortunately, the current government aid programs presently are biased, targeting relatively privileged farmers who are young and cultivate large farmland (in comparative terms).

With regard to the socio-demographic variables, ANOVA results showed that the level of education does not have any statistically significant differences on the indices. However, younger respondents in the survey were more emphatic about

their dissatisfaction with government programs. Whereas no statistically significant differences were found on the labor issues by age groups, it is apparent that farm households of "empty nesters" are suffering from a lack of farm workers.

With respect to perceptions of the quality of life, the most dissatisfied group reported greater concern about issues related to the depopulation of rural areas and a more pessimistic view of government policies. It is no wonder that those farmers who are most distressed by their low quality living conditions have negative perceptions of government agencies and programs.

Locational differences in satisfaction with living conditions, concerns about a paucity of agricultural labor, and government-policy evaluations have a wide range of potential applications in regional policy-making processes. The introduction of cheaper foreign agricultural produce is another negative factor adding to the uncertainty of the farm family's future livelihood. In view of the overall results, what policy makers in Korea should recognize is that rural policies based simply on economic efficiency will increasingly lead to the unequal distribution of resources and that this distortion of production relations, specific to Korea, neglect the needs of the rural poor, inducing further problems related to outmigration and regional disparities.

6.6 Summary

This chapter described the procedures and results of quantitative analyses of the data obtained from the rural household survey. Firstly, on the basis of the results from factor analysis, dependent variables were summed and averaged to

generate indices representing the respondent's (1) satisfaction with living conditions, (2) concern about the declining agricultural labor force, (3) skepticism toward government rural policies, and (4) concern about agricultural trade liberalization. Secondly, the indices were compared by the respondents' location, types of farming, socio-demographic characteristics, and degrees of satisfaction with living conditions.

The test results have indicated that Chunbuk farmers in the survey are more concerned about the low-quality living conditions and about issues related to rural depopulation and an insufficient farming labor than Kyonggi farmers. The respondents in Kyongbuk provinces, however, are more discontent with and more pessimistic about government agencies, policies, and programs. In terms of the three types of farming, mixed and orchard farmers face a more unstable and unpredictable financial status. Aged farmers without children to inherit their farms also undergo hardship in engaging in physical labor due to the fact that they cannot obtain sufficient labor.

Statistical analyses of quantitative data described in this chapter were intended to identify prevailing trends and to seek broader patterns which link the farm to the region and beyond. The relationships identified here will need to be explored by more detailed empirical research and compared with related studies conducted in Korea and perhaps other nations. In the next chapter, the contents of qualitative responses to open-ended questions in the survey are examined in order

to explore the underlying meanings of the survey results that are not identified through quantitative analyses.

CHAPTER VII
THE VOICES OF THE KOREAN RURAL POPULACE: A CONTENT ANALYSIS OF SURVEY DATA

The data collected from the scale items in the questionnaire were statistically analyzed in the previous chapter. These analyses are, however, limited to the representative concepts identified via factor analysis and further explanation by the other statistical techniques. In order to incorporate the respondents' own statements and perspectives, the questionnaire also included an open-ended section of questions requesting personal opinions and comments on agricultural trade liberalization and related rural issues in Korea. To connect an objectified description from statistical analyses with personal narratives, the content of the respondents' comments are examined in this chapter, and their underlying meanings and particular implications for the research questions are identified. This chapter, thus, discusses Korean farmers' own accounts of major rural issues in light of the locational differences of opinions and regional socio-economic conditions and constraints which face Korea at the present time.

7.1 Method of Analysis

The open-ended questions in the questionnaire addressed two issues: (1) the effects of agricultural trade liberalization on the respondents' family and farming and (2) the plans of farmers participating in the survey for the next five years. A majority of these farmers outlined their concerns related to the opening of agricultural markets and deteriorating rural social and economic conditions and

their short-term strategy for farming and household economy. Of the total 483 respondents, 364 (75.4 percent) provided responses to either one or both of the questions. The length and the scope of responses were diverse ranging from short, simple phrases to long, elaborate personal opinions and renditions of experiences related to the topics.

The basic approach of content analysis is based on the following steps. Through repeated readings, a classification system for major topics and issues was developed. Comments related to each subject matter were, then, identified and tabulated. For the detection of any variation by location, this compilation and classification of comments was performed separately for each province. The content of remarks covered an extensive range of information, insight, and ideas. In the process of tabulating and counting, the topic was not enumerated more than once for any individual's comments although some obviously covered several relevant subjects. In other words, largely based upon the sentential context and tone of the notes, only one major motif was identified and counted in each respondent's comment for the purpose of comparisons of the three provinces. The classification of the remarks was not designed for a statistical analysis but rather for a more open-ended interpretation of the cardinal issues signified by the respondents within the Korean political, cultural, and social settings.

Table 7.1 displays the major topics and the percentages of comments in each subject category. Although no statistical analyses were calculated, a

Table 7.1 Identification of Major Issues in rural Korea, 1997:
A Content Analysis of Survey Data

Major Topics	Province			
	Total N=364	Kyonggi N=110	Chunbuk N=106	Kyongbuk N=148
• **Globalization and Political Economy**	33(9.1%)	13(11.8%)	9(8.5%)	11(7.4%)
Market opening and restructuring are inevitable and necessary in globalization. Agriculture is making a sacrifice in order to prevent sanctions against Korea's exports of manufactured products.				
• **Disenchantment with Government Policies**	12(3.3%)	5(4.5%)	4(3.8%)	3(2.0 %)
Rural communities are deluded and disenchanted with inconsistent agricultural policies.				
• **Food Safety and Public Health**	6(1.6%)	1(0.9%)	1(0.9%)	4(2.7%)
Introduction of diseases and vermin and exposure to pesticides and preservatives endanger public health and farming.				
• **Public Responsibility**	10(2.7%)	4(3.6%)	3(2.8%)	3(2.0%)
Consumers should be conscious of the need for purchasing home products.				
• **Comparative Disadvantage of Korean Agriculture**	60(16.5%)	13(11.8%)	20(18.9%)	27(18.2%)
Farming in Korea is inherently small-scale, labor-intensive, and family-oriented.				
• **Concerns about Decreasing Prices**	74(20.3%)	30(27.3%)	14(13.2%)	30(20.3%)
Due to importation, the prices of most farm products are decreasing, causing economic losses.				

Table 7.1 Identification of Major Issues in rural Korea, 1997:
A Content Analysis of Survey Data (continued)

Major Topics	Province			
	Total N=364	Kyonggi N=110	Chunbuk N=106	Kyongbuk N=148
• **Soaring Debt Burdens and Lowered Morale**	37(10.2%)	6(5.5%)	13(12.3%)	18(12.2%)
Debt burdens are only growing, threatening farm families' livelihood. Agricultural trade liberalization and decreases of income lower farmers' morale. The declining rural economy and quality of life discourage young generations from engaging in agriculture.				
• **A Positive Outlook**	33(9.1%)	7(6.4%)	4(3.8%)	22(14.9%)
In the long term, agricultural trade liberalization will promote technological development, crop specialization, and large-scale farming.				
• **Calling for Government Action**	27(7.4%)	9(8.2%)	8(7.5%)	10(6.8%)
Active government measures are needed to prevent decreases in prices, to provide appropriate infrastructure, and to adjust support programs to specific regional conditions.				
• **Other Concerns and Issues**	72(19.8%)	22(20.0%)	30(28.3%)	20(13.5%)
-Personal difficulties including education of children and deteriorating health -Indifferent and alienated attitudes toward policies -Examples of market domination of imported products -Responsibilities for farmers to cope with changing socio-economic environment -Plans to expand/reduce farmland and to improve quality of produce -Importance of non-economic roles of agriculture -Conditions for organic farming -Disadvantages of land regulations -Concerns about degrading agro-ecological conditions				

comparison of the frequencies of messages in each subject category reveals regional differences in the identified topics. The next section discusses these themes and supports them with the verbatim translations of the respondents' comments. The notes which are quoted in the following section have been to a certain degree modified in the process of translation in order to clarify the latent meanings of Korean sentences. Pseudonyms are used for the respondents to protect their privacy.

7.2 Identification and Discussion of Major Rural Issues in Korea

7.2.1 Globalization and the Political Economy

Comparisons of scale items by the chi-square statistic have revealed that most farmers in the survey acknowledge the inevitability for globalization of the agricultural sector in spite of the current adverse effects on their livelihood. Likewise, about 9.1 percent of the respondents (33 of the total 364 comments) expressed the opinion that increased market access and restructuring in the agricultural sector are inevitable and are required for the nation to partake of and to function in the global society and economy. The Korean government has constantly made efforts to convince the public that trade liberalization in conformity with the agreements concluded from multilateral trade negotiations such as the GATT/WTO and the APEC is a step forward to integrate the nation more fully into a global system and to enhance the national interests.

The farmers in the survey have indicated that this globalization is presently not based on the reciprocal development between the global and the local; or

between the urban and the rural. Rather, most comments in this category have mentioned that the negative effects upon the local farm families are partly due to a lack of proper adjustment policies and directions at an institutional level. Further, some cited the occasionally hasty dissolution or radical policy changes of farm aid agencies and programs as a cause of rural problems.

Most farmers' comments indicate that the agricultural sector is making a sacrifice in order to prevent sanctions on exports of manufactured goods. Park Soo-yong, a 39-year-old farmer from Kimchon-shi, Kyongbuk Province described the conditions of local supply and demand which have been challenged by liberalized markets.

> Even though it has been said that to open the markets is inevitable, I think it is a diplomatic measure for the nation to export manufactured goods abroad. But its related problems are already occurring. Because of imports of grapes from Chile, the prices of domestic grapes have dropped 30 percent. The prices of all kinds of produce are also dropping. I will follow the current farming scale for a while, but if the products I am now producing cannot compete in price, I intend to quit farming and start a commercial business (Park Soo-yong, 39, Kimchon-shi, Kyongbuk Province).

The farmers in the survey called for a modification of the effects of globalization and an open economy through state organizations and programs. A few farmers pointed out the limits of individual farmers' capacity to develop their own specialty while facing global forces and the widening economic disparities between the urban and the rural households.

> I admit that globalization and trade liberalization are inevitable. But I think it is difficult to specialize in certain crops and make them competitive in the world market for oneself. The government's active measures such as

> providing education for management and technology and paying attention to the [welfare] of rural villages are needed (Lee Tae-kwon, 43, Hwasung-gun, Kyonggi Province).
>
> Importation of farm produce is beneficial to urban residents, but it is not to rural communities. Fundamental reforms of the marketing and distributing processes of produce are necessary together with the government's guidance about how to improve the quality of products (Yang Jong-sung, 37, Suwon-shi, Kyonggi Province).

Development of infrastructure, reforms of processing and distributive activities, research, extension, and training are strategies particularly identified by the respondents, which might alleviate the immediate effects of progressing globalization.

7.2.2 Disenchantment with Government Policies

Although most respondents to a certain extent divulged their frustration with the underlying political workings of trade-related policies, some comments were more distinguished by political distrust and skepticism. About 3.3 percent of the comments were characterized by the respondent's political alienation and disenchantment. The farmers in this category have revealed frustration towards what they consider to be incoherent, extemporaneous government policies and programs. The respondents have indicated that the lack of long-term measures to prepare farmers for market mechanisms affects them the most along with decreasing prices. In fact, most comments demonstrate that farmers accustomed to state-intervention types of policies suddenly find themselves competing with global traders in international commodity markets.

> The government's inconsistent policies reveal that agriculture is getting ignored more than before [the market opening]. Because even the programs

> to designate and support 'a farming successor' or 'a full-time farmer' are inconsistent, the government's investment does not show its effects. Its policies are not substantial but only rhetorical (Ju Yin-soo, 30, Puan-gun, Chunbuk Province).
>
> It's frustrating that the government has opened the markets when we are not prepared at all. The policy makers taking charge of agriculture should provide a secure environment to make farmers able to focus only on production for a long term. Despite this obligation, whenever Minister of Agriculture is replaced, most policies formerly pursued become useless. It is wrong that agricultural policies are dealt with as political matters (Kim Min-jong, 48, Koryung-gun, Kyongbuk Province).

The politicization of agricultural policies has been quite common especially in national and regional elections. Given politicians' habitual violations of campaign pledges and modifications of regulations, farm families feel that the government is not attentive to their situation. By and large, the respondents indicate that they do not believe in the long-term efficacy of any policies or programs. More importantly, a perceived lack of fairness and equity in administering rural programs is identified as one of the major sources of resentment and alienation. This also reflects the opinion of many farmers that within rural communities, the relatively privileged group possessing land and credits are the recipients of more government aid and attention based on greater economic efficiency. Political distrust and detachment from government initiatives tend to result in farmers' noncompliance with policies and public protests. Formulating and implementing impartial rural support policies and programs as well as reducing the social and economic disparities between urban and rural places and cultures are needed as a way to gain trust from the rural populace.

7.2.3 Food Safety and Public Health

A small number of the respondents (1.6 percent) expressed their concern about the effects of the introduction of diseases and vermin through imports upon Korean farming systems and the public health. Recently, demands from civic groups and consumers as well as farmers for a careful inspection procedure for imported foods and standards for products and processes used in the food system have increased in conjunction with the growing availability of imported products. A few respondents expressed this concern as follows.

> As I see it, imports of produce do harm to the public health. It's because farm produce, particularly fruits, would normally decay after a certain period, but imported fruits, to which antiseptic treatment are applied, are preserved for a long time and don't decay. I want the government and public institutions to give consumers information on this matter for their health (Kang Min-sup, 40, Kimchon-shi, Kyongbuk Province).

> Due to imported farm produce, domestic products are losing their market. I think that imports will affect the public health and that insects and diseases will be introduced to the country. With a thorough inspection, the government should take care of the public health, crop diseases, and damages from insects. This will make farmers use fewer pesticides and produce quality products (Han Gyung-whan, 51, Yongju-shi, Kyongbuk Province).

Well-publicized cases such as "mad-cow disease" in Britain and high levels of preservatives in imported wheat flour recently fanned the public concerns about food safety. Allegedly dioxin-contaminated pork imported from Belgium was the latest case (June 1999) which stirred up some of the most extensive social criticisms in Korea. While consumers and food producers are asking far stricter measures to regulate food safety, the protection and representation of consumer rights and interests are still not firmly established in Korea. Standards are set in

only a few areas pertaining to safety and labeling, and thus, this is an area that needs increased government attention. As animal production methods, exposure to various chemical additives and pesticides in food, and potential effects of genetically engineered farm products become much greater concerns for consumers and food producers, the demand for organically grown produce is expected to grow quickly.

7.2.4 "Think Global but Buy Local": Importance of Consumers' Trust and Consciousness

A total of 2.7 percent of the remarks were on the need to encourage consumers to purchase domestic products. Concern that "Buy Korean" rhetoric, based on the traditional idea of "*shintobulyi*," no longer mattered was often present in their comments. The concept of "*shintobulyi*," which stems from the agrarian society, literally means that one's body and land (the soil in its narrow sense and the natural environment in its broad sense) where he/she resides are not intrinsically separate. This implies that it is a great advantage to one's health and well-being if he/she is in harmony with nature by consuming produce grown on the land (or the soil) where he/she dwells.

Park Eun-gil, a Kyonggi farmer anticipated that owing to price differences, the public would prefer cheaper foreign products.

> These days, the idea of *shintobulyi* is not respected. Because domestic agricultural products are good in quality but are expensive, I think low-income consumers and restaurants will become dependent on imported food products. So, it is a grave concern that the farmers' income is decreasing. I am worried that domestic products will lose markets (Park Eun-gil, 45, Ansung-gun, Kyonggi Province).

Wu Chul-min, a 63-year-old farmer from Chongdo-gun, Kyongbuk Province indicated that the changing lifestyles of young urban residents seeking convenience and cost-effectiveness are also a cause of the decreasing market share of domestic products.

> It is acceptable that the opening of markets to farm produce is unavoidable. In this era of the nuclear family, children move to cities, and they do not respect the value of agricultural products that we, farmers produce with hard work and sweat. It is because cheap farm products are imported and because it is convenient and inexpensive to buy them in the market. I am committed to farming with the idea that domestic products will be appreciated in the future (Wu Chul-min, 63, Chongdo-gun, Kyongbuk Province).

Nongovernmental organizations as well as para-state agencies such as the National Agricultural Cooperative Federation have placed emphasis on the importance of raising consumers' consciousness to appreciate homegrown produce. However, this kind of nationalism or patriotism in an age of globalization is viewed "backward and troublesome" by "the internationalist-minded" Korean leadership (Shim and Lee 1998: 10, 12). As described earlier, in recent years, policies with the goals of opening the economy and attracting foreign investments have been recklessly pursued by the Korean state. Further, such policies are also mandated by the IMF's bailout program as a way to overcome the imminent collapse of the nation's financial sector. The government, thus, wants the outside world to perceive Korea as being more accessible and open to foreign investment. These conflicting views have caused friction even within government organizations and in society as a whole.

Nevertheless, the financial crisis gave critical momentum for removing inefficiency throughout the Korean economy regardless of its social implications. In this respect, the Korean public as well as farmers are forced to reconcile the reality that traditional, nationalistic beliefs and ideas are not universally appreciated in the nation.

7.2.5 Structural Limits in the Korean Agricultural Sector: Labor, Marketing, and Comparative Disadvantage

About 17 percent of the comments have pointed out that the market opening is only aggravating the inherent structural problems of Korean agriculture, which are characterized by small-scale, labor-intensive, family-oriented farming. The comparative disadvantages which result from high labor costs, low level of mechanization and technological development, irregularities and extortion in the marketing system, and a lack of scale economies were the most cited among the various but intertwined structural problems of the farm sector.

First of all, as highlighted in the previous chapter, the farmers in the survey have indicated that the diminishing agricultural work force, and thereby rising labor costs, are a major concern. Shin Yun-tae, a 57-year-old Chunbuk farmer described the declining rural population and the desertion of farming by the young as follows.

> Importation of agricultural products is causing huge economic losses to farmers. As the prices of livestock as well as vegetables keep dropping, it's difficult to earn a living by farming these days. Because even a few young people who remain in rural villages are presently seeking a job in construction sites in cities, it seems that our villages will begin collapsing. No matter how good programs are made, it will be useless if young people are leaving agriculture (Shin Yun-tae, 57, Namwon-shi, Chunbuk Province).

Apparently, the decreasing agricultural work force relates to high production costs, which means low profit margins and low competitiveness.

With respect to rural labor shortages, some respondents mentioned the need for mechanization of the production process. Generally, mechanization is viewed as a part of solutions to deal with decreasing agricultural work force, yet some respondents have mentioned that this solution is not applicable across all regions. As Lee Jae-hyun from Suwon-shi, Kyonggi Province described, small fragmented farmland and rugged terrain hinder mechanization.

> Because most arable land [in my village] is too small to mechanize production, farmers are always busy doing all of the farming work manually. We don't even retrieve the cost of production because of the price competition with imported farm products (Lee Jae-hyun, 52, Suwon-shi, Kyonggi Province).

In places where mechanization is possible, farmers may invest in machinery with loans so as to reduce the cost of production. Nonetheless, as borrowing rates rise, farm capital after harvest must largely be channeled to interest payments. Shin Hwa-soo from Chunbuk Province described soaring debts as follows.

> Domestic agriculture is experiencing labor shortages with a low level of mechanization. Considering that the cost of labor is cheap in foreign countries like China, we cannot make our farming competitive. Compared to developed countries, farmers in this country can hardly afford to buy farming machinery, which only makes debts mounting. The purchases of machinery are a major source of debts (Shin Hwa-soo, 40, Chongup-shi, Chunbuk Province).

A local government official in Chunbuk Province emphasized that in some areas where the average farming scale is small, farmers barely get economic returns from their heavy investments in machinery and equipment because of the small

farm size and relatively small yields. Mechanization does not create internal economies of scale in farms smaller than an optimum level. Yet without considering minimum farming scale, some farmers are compelled to purchase expensive farming machinery with a view to reducing labor costs. This is often encouraged by government loans. The increased acquisition of farming machinery translates into increased capitalization of production, which alternately raises the optimum scale of farms, leaving small farms further behind.

In this context, the focus of post-Uruguay Round government policies and programs in Korea centers on consolidating farmland and enlarging the average farming scale. Kang et al. (1995) estimate an optimum scale of rice farming in Korea to be 20 to 25 hectares when the farmer owns medium-sized machinery including a tractor, a rice planter, a combine, and a grain dryer. However, these researchers also note that due to low land per household ratios, the uneven distribution of arable land throughout the nation, and regulations on transactions of farmland ownership, the enlargement of farming scale to an optimum level is not feasible. Further, several studies suggest that increasing farm size and introducing capitalist corporate farms would probably reduce the quality of life in rural areas (Goldschmidt 1978). However, it is obvious that despite the adverse conditions, policies based on economic efficiency will continue being pursued and that in this process, small-scale farms are subject to further exclusion from government aids and development programs.

In addition, a few comments (4.1 percent of the total) have contended that farmers are exploited by fraudulent and irregular practices throughout the agricultural marketing and distributing system. The comments in this category have indicated that vegetable and livestock producers in particular are frustrated with importers, merchants, and middlemen deliberately obscuring the origins of products and taking high margins in marketing. Lim Seon-kyu, a 40-year-old Kyongbuk farmer described this situation as follows.

> I feel very insecure about the future as most livestock farmers do, especially this year. Imported broiler chickens sell as frozen meat. If merchants mix imports with domestic products and/or do not show their origin, the price will continue to fall (Lim Seon-kyu, 40, Kimchon-shi, Kyongbuk Province).

Large conglomerates' (*chaebol*) involvement with food import businesses was also described as blatantly inconsiderate and unfair. These comments imply that a direct or cooperative marketing method connecting producers and urban consumers needs to increase.

The number of Kyonggi farmers' comments (11.8 percent) on this whole subject category was smaller than that of the other two provinces. Chunbuk (18.9 percent) and Kyongbuk (18.2 percent) farmers, who experience depopulation in their villages, frequently face labor shortages and undergo more adversities and obstacles created by aggravating production conditions. This indicates that regional variations of farm sizes and farm types are mediating variables in the mechanization and capitalization of production. In short, the farmers in the survey widely recognize the comparative disadvantage in the nation's agriculture and

anticipate that these impeding factors will be more exacerbated as the economic viability of farm families deteriorates with decreasing prices.

7.2.6 Decreasing Prices and "the Hog Cycle"

About one fifth of the total comments (20.3 percent) were concerned with falling prices of farm produce. Multitudes of examples of price drops were addressed in relation to their impacts on the farmer's earnings and livelihood.

> To add to our misery, imports of farm produce are causing domestic products to lose markets. Sesame imported from China is ten times cheaper than domestic sesame, and there is also a large difference in prices of fernbraken. Because of this, people buy more Chinese products (Shim Seung-yil, 63, Koryung-gun, Kyongbuk Province).

> Due to the market opening, the prices of all sorts of produce fluctuate so much. Even the price of a certain crop drops one third within two or three days. I want to ask the government to accurately measure the quantities of domestic products and to control the items and quantities of imported products (Hah Doo-chul, 37, Sungju-gun, Kyongbuk Province).

> The government argues that the market opening is inevitable, which may be good for the whole country. But rural villages have suffered many of economic problems. The main reason is that while the prices of farm equipment, materials, and seeds have increased, the prices of agricultural products have dropped almost a half. For example, a male worker costs 50,000 won (equivalent to approximately U.S.$50 in 1997) per day and a female worker, 30,000 won (approx. U.S.$30). On the contrary, a box of apples (15 kilogram) sells at 10,000 won (approx. U.S.$10), pepper per *gun* is 1,500 won (approx. U.S.$1.50), and a head of cabbage is 300 won (approx. U.S.$0.30). All of these prices are far below the costs of production. This only increases the debts (Sohn Ki-jong, 65, Chongsong-gun, Kyongbuk Province).

These examples indicate the imbalance between supply and demand and also illustrate problems associated with radically fluctuating prices. In general, due to structural constraints, behavioral characteristics, and the dependence on the physical environment, the annual supply of agricultural production is unpredictable,

causing cyclical fluctuations of prices. According to Lee and Choi (1997), the items which experienced the largest decline of domestic production in Korea after the domestic markets opened included apples, grapes, sesame, and soybean (see Appendix G and H for major exporters and comparisons of domestic and international prices of agricultural products). Livestock producers are also expected to continue undergoing hard time with international pork and chicken prices at ten-year lows (Lee and Choi 1997). Most respondents have pointed out that market failures also make it difficult for the farmer to select crops to cultivate.

Jin Seo-kwan, a 40-year-old Kyonggi farmer, explained the phenomenon called as the "hog cycle," which is prevalent among field-crop producers. The "hog cycle" refers to individual farmers' increase of production of certain commodities in response to rising prices in one year and subsequently dropping prices resulting from overproduction in the next year (Tarrant 1992: 244).

> There are problems with government policies. I don't disagree with the market opening itself. But because farm products are imported without any consideration of the current farming conditions and many problems in rural areas, a domino reaction is occurring. One crop loses its competitive edge and then its effects are spreading to other crops as a chain reaction. Because agricultural production is not based on long-term farming plans but on immediate effects, everyone cultivates the same high-priced crops and send them to the market at the same period, thus making the market order break down and prices nose-dive (Jin Seo-kwan, 40, Pochon-gun, Kyonggi Province).

Tarrant (1992), however, maintains that depressing prices and decreasing farm incomes are attributed to neither imports of cheaper produce from abroad nor imperfect market organization. Essentially, these problems are rather caused by the inherent nature of "modern" agriculture involving rising productivity due to

industrialization of agriculture, a slow rate of increase in demand, and farmers' behavioral tendency to increase production (Tarrant 1992: 245-250).

In order to reduce supply and to adjust the farm sector to the open markets, the Korean government has established farmland withdrawal and direct income reparation programs which are allowed by the WTO provisions. The government is also encouraging aged farmers to retire early. Still, given farmers' strong attachment to land and the lack of alternative jobs and/or social-welfare measures, these programs are not expected to be effective in counteracting rising production amidst decreasing prices. Moreover, while most farmland reservation or set-aside programs need to be implemented in association with environmental conservation, the restructuring programs in the Korean farm sector still do not fully reflect this cooperation. As implemented in the E.U. countries, programs should be applied to conserve threatened eco-environmental systems by compensating farmers if they practice environmentally favorable farming methods (Tarrant 1992: 268).

7.2.7 Soaring Debt Burdens and Lowered Morale

About 10 percent of the comments addressed the soaring burdens of debts, faltering opportunities to derive basic livelihoods from farming, and lowered morale. These comments have noted that increasing liabilities impose an agonizingly uncertain future on farm families. Several respondents (3.8 percent) expressed their anguish over the precarious and unstable situation where debts are growing in inverse proportion to falling incomes. As stated earlier, most debts are incurred primarily by investments in farming machinery and facilities, a purchase

and/or rental of farmland for enlargement of scale, loans for children's education, and housing renovation. Furthermore, most farm families continue to get new loans for repayments of interests and mature debts, and thus, their ability to serve the borrowing further deteriorates. This implies the increasing dependence of agriculture on capital and "the declining ability of the farming industry itself to determine its own future" (Munton 1992: 81). A few respondents gave a detailed description of their multiplying debts.

> While my incomes have dropped annually, the debts have grown. It is difficult to balance between farm earnings and expenses, which lowers my morale. And the absence of proper government measures in response to trade liberalization makes me worry about the future. Rural communities are in desperate need of government support programs (Hwang Ik-hun, 44 Bonghwa-gun, Kyongbuk Province).

> Very few young people remain in the rural village, and all of the villagers are elderly. I am 65 years old and wonder if I can continue farming for the next five years. I just hope to pay off the debts. My debts include 13 million won (approx. U.S.$13,000 in 1997) for the housing repair loan and 11 million won (approx. U.S.$11,000) for the costs of the machines used for the apple orchard and the education loans for my children. I have to continue farming until I can pay off all of these debts (Min Kil-jun, 65, Chongsong-gun, Kyongbuk Province).

The number of Chunbuk (12.3 percent) and Kyongbuk farmers (12.2 percent) in this category was higher than that of Kyonggi farmers (5.5 percent). The most discernible elements incorporated in all of these comments were helplessness, despair, and anger.

> I have been committed to agriculture and a rural life, but I feel like I have been cheated all my life in farming. I expected it to get better every year, but it turned out to get worse. Though I am getting old and losing health, without any savings and without enough workers to do the farming, tillage is the only way for me to earn a living. Because I already readjusted the farmland and invested in it, I am presently receiving education to start a new venture in horticulture. My debt from the Agricultural Cooperative is

> growing even by the hour, but the price of rice remains at the same level. Whenever I hear about corruption [of politicians and businessmen] involving hundreds of billions of won, I feel like bursting into a fit of rage (Kwon Yong-jin, 60, Namwon-shi, Chunbuk Province).

As Kwon Yong-jin described Korean farmers' common attitude towards society, the lack of rural welfare measures are what leads farm families to be alienated and marginalized[14].

7.2.8 A Positive Outlook on Agriculture

In stark contrast to the vast majority of the respondents, about 9.1 percent of the farmers reported a positive and optimistic outlook for the agricultural sector as well as their personal lives in the coming years. While a part of the remarks covered the hardships facing Korean farmers in general, their overall evaluations of the market opening and the future prospect were distinguished by acceptance and confidence. According to this view, the current obstacles and ordeals in the transitional period are an expected process, which once concluded will lead to an improved farming sector. In other words, a long-term consequence of successful restructuring would be a lean and efficient agricultural sector, which could be competitive in the global market. Further, based on the positive evaluations, agricultural trade liberalization will promote technological development, crop-specialization, and large-scale farming.

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[14] In July of 1999, approximately 100,000 farmers rallied in front of the National Assembly Building in Seoul. In this mass protest, farmers demanded legal reforms on the integration of cooperatives and debt-relief funds from the government (Joongang Ilbo, July 9, 1999).

A few respondents illustrated their current prosperous farming business and the advantages of specialization. Park Jun-yong from Kyongbuk Province gave such an example.

> I am cultivating rice in 1,000 *pyong* of the paddy and producing muskmelons in plastic green houses (4,000 *pyong*). I think muskmelons produced in Sungju have competitive edge even with trade liberalization. Although the price competition will still be difficult due to the lack of labor force, it has a potential.... My family's gross annual earnings are around 60 million won (approx. U.S.$60,000 in 1997). After the costs of production including the labor costs are subtracted from the farming income, my family gets 40 million won (U.S.$40,000). With my wife's annual salary of 20 million won (U.S.$20,000), we have 60 million won (U.S.$60,000). As educational expenses and living costs are subtracted from it, we can save about 10 million won (U.S.$10,000). But now that I am 54 years old and farming is hard work, I plan to reduce 1,000 *pyong* of the farmland in five years (Park Jun-yong, 54, Sungju-gun, Kyongbuk Province).

This is a rare example of productive and profitable farming since most farmers cannot share this prosperity, especially given the large amount of liabilities per household and unspecialized farming. Still, it hints at the existence of a huge economic gap in the Korean rural social stratum which currently approximates a pyramid. On the other hand, this example suggests that to develop a specialty based on local diversity and to exploit this niche market may be a part of solution for farm families to cope with the debilitating economic viability and ever-changing international and domestic socio-economic environment.

7.2.9 Calling for New Directions in Rural Policies and Aids to Rural Communities

A total of 7.4 percent of the remarks called for more government aid to rural communities and new policies to manage the open and vulnerable agricultural sector. The respondents have contended that active government measures need be

taken to prevent decreases in prices, to provide infrastructure, and to adjust support programs to specific regional conditions. Common demands for government actions included price stabilization efforts, reforms to the agricultural marketing system, the expansion of irrigation and roads in farming protection zones, decreased prices for machinery and materials, tax relief, the need for crop insurance programs to prepare for market failures and natural disasters, and increases of financial aid for education in rural areas.

Globalization embodied by trade liberalization and the implementation of directives and programs imposed by international institutions such as the GATT/WTO, the OECD, and the IMF discharges the government of those obligations, many of which previously were taken for granted. The level of state financial support for agriculture is restrained by the Uruguay Round agreements. Furthermore, since the recent financial crisis has made economic efficiency an unchallenged doctrine in Korea, social justice is often easily relinquished for maximum efficiency. Sixty-four-year-old Cho Sung-kwan from Chunbuk Province pointed out the lack of assistance to aged farmers.

> The government claims that it has plans to support farmers and rural communities, but the support programs only focus on young, government-designated 'farming successors'. Aged farmers are only doing hard physical labor everyday without any hope (Cho Sung-kwan, 64, Namwon-gun, Chunbuk Province).

This is one of the repeated themes that underlines the necessity of dealing fairly and equally with all concerned. Aged, small-scale farmers are a group now relegated to a marginal position within already marginalized rural Korea. The

process of peripheralization or marginalization of such disadvantaged groups of the rural populace has broad implications for regional disparities, not to mention rural social stratification and class formation. The dilemma that the Korean state is facing is an example to demonstrate how economic principles forego not only social but also spatial democracy and justice.

7.2.10 Other Rural Concerns and Issues

About one fifth (19.5 percent) of the total comments were on miscellaneous personal concerns and issues. Cares about daily livelihood, ill health, and children's education were shown to be common sources of anxiety. Some of the respondents divulged their unawareness of, and indifferent attitudes towards, agricultural policies. Misinformed ideas were also to a minor degree reflected in certain comments although considering the sample size, they were insignificant. Other comments illustrated various topics ranging from pervasiveness of imported products even in traditional five-day periodic markets to friction with a local agricultural cooperative. A few comments placed great emphasis on national food security, the non-economic roles of agriculture including the prevention of environmental disasters, and the farmer's own responsibilities to contribute to the survival of the nation's farming. There was also an example of successful organic farming and its direct marketing.

> To compete against imported products, farmers should focus on quality rather than on quantity. So, I practice organic farming. I set up a fence around the paddy and release ducks in the paddy to catch bugs, not using pesticides and fertilizers at all. I sell all of the rice produced to a cathedral in Kaepo-dong, Seoul. Because it is of good quality, the price is high (Kim Yung-su, 43, Ansung-gun, Kyonggi Province).

While alternative farming methods require more labor and management skills (Tansey and Worsley 1995: 99), environmentally-sound farming practices may provide the means of sustainable agriculture. Independent action and strategy are equally important so that farmers do not continue to rely upon the assistance of institutions that have betrayed them in the past. Most of the comments by the respondents indicate that whose interests or rights are promoted within the farm sector will continue to be one of the focal points of debate pertaining to the evolving agro-food system.

7.3 Summary

This chapter explored the respondents' comments collected from the questionnaire survey. As summarized in Table 7.1, the comments on agricultural trade liberalization and a broad range of other rural issues signify the prevailing attitudes among Korea's rural populace. However, the major themes identified here are not unique to the case of South Korean farmers. Presently, the economic predicaments in rural communities including declining availability of rural labor force and falling prices are to varying degrees shared by most small-scale farm families all over the world. As the global restructuring of the agro-food system proceeds, these problems will undoubtedly become more common.

A paradox of the globalization which is pursued by the Korean state is to gradually limit the state's capacity to properly respond to the needs of society. Whereas the restructuring of the agricultural sector will continue to bring about rural protests, the settlements the government may offer to rural society are largely

predicated upon the GATT/WTO directives and other international provisions. Friedmann (1995: 31), however, suggests that despite the international regulations on the agro-food system, governments could not only change taxation policies and provide direct income support but also utilize "public buying power" for school meal programs and state institutions to help local producers. The Korean state needs to regard such measures not as economic nationalism but as rural welfare measures. Sustainability and equity should become key elements in resolving the fundamental conflicts between national economic interests and internal social welfare.

CHAPTER VIII
DISCUSSION AND CONCLUSION

The present research has explored how South Korean farmers are facing increasingly adverse free-market forces as restructuring in the agricultural sector is proceeding in tandem with the comprehensive globalization process of Korean society and economy. While the agricultural sector is being transformed under neoliberal policies, South Korean farmers, with little or no preparation for a global market order, are forced to modernize their farming operations.

The findings from both statistical and content analyses of the survey data can be summarized as follows. Firstly, whereas a majority of farmers in the survey of the three provinces in South Korea admit the inevitability of integration into the global economy, they are overwhelmingly disconcerted with fluctuating commodity prices and growing instabilities of the farm household economy. Restructuring of the agricultural sector characterized by small-scale, labor intensive farming is legitimized. However, in the course of this process, poorer groups are, to a greater extent, discriminated and alienated from the government's rural development programs.

Secondly, the survey data confirm intra-regional differences in farmers' perceived satisfaction with living conditions, government farm policies, and socio-economic/labor issues. Disparities in the degree of discontent with government policies and socio-economic well-being are explicit between the relatively

diversified, urbanizing region of Kyonggi Province and the underdeveloped, farming-dependent regions of Chunbuk and Kyongbuk Provinces.

Thirdly, in part due to the fact that agricultural trade liberalization entails further neglect of the farm sector in the nation's economic-growth strategy, a pessimistic view of the prospects of agriculture with the increasing market opening is prevalent among the respondents. Most farmers who have not been fully exposed to "free" market mechanisms are confronted by increased uncertainties and economic hardships. The overall findings propound that agricultural/rural policies need to reflect long-term, macroeconomic changes and regionally/locally-based agricultural structure.

The following section further discusses the general implications of these findings within the conceptual framework reviewed in Chapter II. This section will also suggest several policy recommendations while recognizing the limitations of the research.

8.1 Discussion of the Results and the Theoretical Context

As the economic logic of "the survival of the fittest" is rigorously applied to various aspects of society and economy in South Korea, the burden to economize the farming industry is imposed upon each and every farm household in the nation. Small holders are, however, encountering much more severe financial setbacks than larger farmers. This is partly due to more limited access to resources. The increasing openness of agricultural markets depresses local farmers' prices, diminishing their economic returns. Individual farmers' capacity to modernize

farming practices and to increase economies of scale is limited not only by a hostile, competitive market but also by a cessation and/or a reallocation of subsidies. The new rural policies are developed with practical goals intended to phase out inefficient, small-scale farmers in order to create a lean and competitive farm sector.

The major agrarian issues in South Korea identified in this research can be discussed at the global, national, and local levels. Firstly, in terms of the global restructuring of agro-food systems, this research has sought to show that national agricultural structural changes and development can be better understood by locating the nation's agriculture within the broader context of world capitalist economy. The predicaments farm families encounter with the market openings are not limited to South Korea. Mexican commercial farmers who have been negatively effected by the implementation of NAFTA (McDonald 1997) or Greek farmers who have resisted the CAP of the E.U. (Louloudis and Maraveyas 1997) have to face possible dislocation as well if they do not adapt themselves properly to the new market order.

As indicated in the discussion of the concept of the food regimes, the emergent global political-economic and production-consumption relations are driven by policies informed by the neoliberal logic. Under the third food regime, the "self-regulating market" functions on the basis of competition, efficiency, and individual responsibilities. McMichael (1994: 278) contends that the global agricultural liberalization involves "massive spatial and sectoral shifts accompanied

by continual, unresolved political struggles around questions of political regulation, social distribution, and economic recovery". The voices of South Korean farmers exemplify these unresolved political struggles. Korean farmers' discourse demonstrates how this global restructuring of agro-food systems is affecting local farm families, and in turn how these farmers perceive and respond to it. The findings from the survey in this research indicate that South Korean farmers accede to terms of global integration *in principle* while disapproving of state rural policies *in practice*. This is one local response. Differences in a local response are an arena where local social and cultural diversities become manifest, and thus where comparative studies need to be carried out (see Jarosz 1996 for comparative studies).

Secondly, at the national level, South Korean agriculture, which lags far behind the nation's strategic manufacturing sector, also indicates how rural development policies are affected by national schemes for economic growth. During the period of rapid industrialization, the Korean farm sector provided the urban industrial sector with a constant labor supply as well as cheap food staples. Conversely, state intervention including price supports and various kinds of subsidies led farm families to become dependent upon external capital for their survival. As Kasimis and Papadopoulos delineate (1997: 216), such state policies encouraged farm households to conduct "a capitalist venture" without a true "capitalist spirit".

In an era of declining national regulation, what is essentially required in agricultural production and marketing is described to be flexible specialization based on the combination of advanced technology and cheap labor (McMichael 1994: 4-5, 279). In view of the decreasing and "greying" rural population in Korea, however, the evolution of conditions for any form of comparative advantage based on cheap labor are impracticable. In the long term, reunification of North and South Korea, although the timing of this change is uncertain at this juncture, would cause the most significant and extensive transformation of the structure of farm labor and land policies in the peninsular.

Thirdly, at the individual farm level, the current labor shortages in rural South Korea implicates family farm differentiation. That is, whether or not the continuing marginalization of farm families would ultimately lead to their demise is a matter of lengthy debate and further studies. Empirical studies are needed to look into whether the current restructuring of the agro-food system is a part of the processes of "proletarianization," "petty-bourgeoisification," or "embourgeoisement" of farm households, if Marxist terminology is used (Kasimis and Papadopoulos 1997). Even without referring to such terms and over-generalizing the complicated context, a certain proportion of farm families are liable to turn into urban/rural wage laborers, contract farm households, or other forms of production, partly depending on the availability of regional/local employment opportunities. The turnover rate in the Korean agricultural sector is going to increase during this period of implementation of, and adjustment to, the

GATT Uruguay Round agreements. Nevertheless, the family farm has survived as a "small, part-time, quasi-subsistence" farm, resisting a commodification process in capitalist development of agriculture (Marsden et al. 1987: 299).

Still, according to the "treadmill" theory, full-time farmers will not be able to get out of a cost-price squeeze, by which the prices obtained for farm produce will not rise on a par with the costs of production (Bowler 1992: 14). This theory implies that the financial difficulties of farm families will not ease even with their continual intensification of capital and labor in production. The common and overwhelmingly fatalistic remarks by South Korean farmers in this study attest to the large number of farm families trapped in a quandary.

The question of the transformation of South Korean family farms and the uneven development of agriculture needs to be explored with further empirical evidence. Several studies on southern England (Marsden et al. 1986, 1987) and on Greece (Louloudis et al. 1989a and 1989b) suggest an exemplary typology of farms. Their conceptual framework of research builds on the external and internal relations between the farm household and capital. The external relations are represented by *technology* involving manufactured inputs and technical assistance, *finance* including mortgage and credit services, and *marketing* regarding linkage of products to wholesaling and retailing. The internal relations rest upon the ownership of capital and land rights, control over management, and the composition of farm labor (Marsden et al. 1987 and Bowler 1992, Italics added). These specified criteria are useful in verifying the process of differentiation of

family farms. The following six categories by Marsden et al. (1986) show a general typology of farms in developing capitalist agriculture.

(1) Full-time, family-owned agricultural businesses;
(2) Hobby and retired part-time farm businesses;
(3) Sub-marginal farms reliant on pensions, savings and insurance schemes;
(4) Farm households with diversified activities on and off the farm;
(5) Farm households with merged capitals on and off the farm;
(6) Corporate businesses (Marsden et al. 1986; Bowler 1992: 23)

Under the present stage of the capitalist development of Korean agriculture, both full-time and part-time, family-owned farms with a certain, if not high, degree of subsistence characteristics are prevalent in the nation. Hobby, tourist farms are present in small numbers, and are expected to grow, mostly in peri-urban areas. Large corporate businesses are now mostly limited to importation of feed and foodstuffs, livestock processing, and agricultural land development. Currently, the government's selective funding for relatively large-scale, young farmers (e.g. larger than two hectares for rice cultivators and younger than fifty years of age) encourages entrepreneurial and contract farming. Although the typology cited above is useful as a heuristic method for problem-solving, it would be inappropriate to presume that rural society will advance in such a linear stepwise progression.

What should be noted, however, is the fact that differentiation of family farms is a geographically-based/biased process. On this subject, some parallel lines of inference can be drawn from the Greek case albeit the distinct cultural and social backgrounds of Greece and Korea. Kasimis and Papadopoulos (1997), summarizing previous studies, state that

> [t]he massive introduction of advanced technology had diverse effects in lowland and mountainous areas by increasing per capita income disparities, and by launching a new inter-regional division of labor between them... [In] the mountainous zones, ...family farms are not articulated with the capitalist economy and seem to lean towards survivalist or subsistence farming, and [in] the plain zones, ...family farms benefit the most from the modernization of Greek agriculture (Kasimis and Papadopoulos 1997: 219).

Correspondingly, Jung et al. (1995) reach a similar conclusion in their research on the geographical and temporal comparison of the socio-economic structure of family farms in Korea. Comparing the peri-urban, the plain, the low intermontane, and the high intermontane areas, Jung et al. (1995) report that the decrease in farm households and population in intermontane areas is more accelerated than in the other zones. In most mountainous areas, hostile topographical conditions restrict the expansion and consolidation of farmland and mechanization. Moreover, isolated locations forbid off-farm employment, which could compensate for decreasing agricultural incomes in more accessible areas. In summary, these previous studies indicate that the geographical context plays a critical role in the introduction of technology and a differentiation process among family farms. Nevertheless, as mentioned above, whether, how, and/or where family farms are transformed into rural wage laborers, simple commodity producers, propertied laborers, industrialized corporate farms, or other types of farms are another significant area where empirical, comparative studies are needed along with due regard for relevant theories.

The other issues identified at regional and local levels in this research are associated with quality of life, or welfare in rural communities. In general, rural

villagers are described to be more receptive and responsive to welfare needs than urban dwellers (Rogers 1987). In the present study, the respondents' own reports on satisfaction with living conditions revealed intra-regional differences in well-being and the constant needs of an infrastructural improvement. Much of the research which has examined rural deprivation and uneven regional development shows the increasing importance of the so-called "marginalized" types of needs in peripheral areas. The "marginalized" needs include quality child and home health care, provisions of amenities, alternative job training, and retention of schools in depopulated villages. These needs are shown to be directly related to a condition whereby "the state incurs a sizable loss of legitimacy" (Hadjimichalis 1987: 286). In the long term, the Korean state is likely to detach itself from welfarism by mobilizing self-reliance of rural communities and promoting an active involvement of a private sector. However, as discussed in Chapter IV, given the past politically-charged, uneven land development in Korea, rural communities still require the government's decisive role in alleviating regional socio-economic disparities.

Importantly, the respondents' requests in this study emphasize that rural policies need to encompass quality of life perspectives. Expansion of pensions and reduction of health insurance premiums for the elderly, and increase in financial support for education of rural children require a formulation of policies and programs at the state institutional level. Via externalization of rural support, the state should be able to introduce and expand technological assistance, efficient marketing systems, alternative agricultural land-use practices, and

compensation/insurance programs for frequent natural disasters and massive market failures. In accordance with the law of diminishing returns, or a vicious circle of spiraling costs in agriculture, regions with a high proportion of farming protection zones will suffer more economic deterioration. In this respect, rural welfare programs also should reflect a geographical configuration of local economy and farming.

To conclude, the global restructuring of agro-food systems motivates nation-states to aim at "national competitiveness rather than national coherence" with regard to their agricultural sectors (McMichael 1994: 5). By and large, state policies have geographically- and locality-biased components. In the case of South Korea, the rationalization of market mechanisms and unregulated capital are inclined to exacerbate the existent socio-economic disparities in not only urban versus rural relations but also intra-regional relations. The deeply rooted, political economic alliance further challenges the South Korean government in conforming to recognized principles, rules, and standards. Insofar as farming is pursued as a way of life, the government should recognize its obligation to provide fair conditions in which basic human needs are met.

8.2 Implications for Rural Policies

Although the previous section has provided several policy options primarily from the social-welfare perspective, there are still a few implicit and explicit policy directions upon which the Korean state should reflect. Achieving desired transformations in the farming sector will hinge on the state's concerted efforts if

change is to occur within the framework of existing institutions. With dwindling fiscal capacity, the government will have to effectively utilize all available human and physical resources. Alternative policies can be converged from three directions: political, agro-environmental, and regional developmental aspects.

Firstly, the formulation and implementation of any rural policies and programs will need to increasingly incorporate bottom-up and collective approaches. Self-help among farm families and rural villages could be achieved from the conscious, active participation of farmers and other rural dwellers in every dimension of issue identification, technology development, creation of adaptive strategies, program implementation, and policy assessment (Pretty 1998). Pretty (1998) contends that both government and nongovernmental development programs should be carried out on local farmers' terms in order to prevent adopted practices and restructured institutions from turning obsolete once the programs are completed. For instance, it has been observed that when farmers are coerced to adopt uniformly new technology or a new farming practice, not only are most farmers reluctant to adopt the new methods, which is partly owing to their risk-aversion attitudes, but also they drop the newly adopted technology and practice soon after initial aids or financial incentives are exhausted (Pretty 1998). A key element of making rural programs effective in the long term is suggested not to merely impose an inflexibly-framed template of new programs on farmers and rural communities but to let them modulate the projects to their own specific needs and to enhance farmers' capacity to take their innovative actions.

Secondly, with increasingly irreversible environmental degradation, it is getting more imperative and crucial to integrate eco-environmental concerns into rural development (Bredahl et al. 1996). Understanding and harmonizing the manifold, intricate links between agriculture, trade, and environment at the local level is critical for the survival of farm families and rural communities. In this regard, sustainable agriculture can be viewed as a conjunctive mode to link concerns about environmental protection with those about livelihood (Johnston et al. 1994). Although conventional farmers relate organic agriculture to low yields, empirical studies indicate that minimizing the use of external inputs do not necessarily generate low output (Lutz 1998). The use of low input practices and integrated pest management can ensure higher profit margins, possibly resulting in less harm to farmer and consumer health. Currently, South Korea is the second largest user of rice pesticides in Asia next to Japan and followed by China and India[15] (Pingali and Gerpacio 1998). Farmers are bound to be trapped into increasing the appliance of insecticides, fungicides, and herbicides to crops due to the increasing resistance of pests to bio-chemicals. Employing a broad array of sustainable alternatives including nutrient recycling, crop rotations utilizing nitrogen fixation, low inputs of agrochemicals, and integrated pest management is a way to procure profitable and efficient agro-food system (Lutz 1998).

[15] It should be noted that the levels of pesticides applied to fruits, vegetables, and other high-value commodities on a unit-area basis are still higher than the use of pesticides to rice (Pingali and Gerpacio 1998).

Thirdly, rural development should lay great emphasis on diversifying and diffusing sectoral and geographical composition of a region's productive system. The challenge to the government is to create an environment where small and medium industrial firms and tourist facilities coexist with the production of local agricultural specialties by developing infrastructure and business services (Hadjimichalis 1987). Encouraging the establishment of food processing, marketing, and non-farm entrepreneurial activities would help furnish alternative employment, income-generating opportunities, and surplus value in the local economy (Pretty 1998).

Combining organized interests from government measures, financial assistance, and self-reliance of rural communities needs to be pursued with a view toward the diversity of local conditions and necessities of local people. This would help provide a satisfactory opportunity base in rural areas for all rural residents.

8.3 Limitations of the Study and Future Research Directions

This study attempted to draw a meaningful interpretation on the changing internal agrarian changes of and external influences on South Korea in the context of the emergent globalizing economy. The present study, as a matter of course, has several limitations, which in turn can provide a number of aspects and dimensions of future studies. Indeed, the limitations of the study are to be seen as a beginning of further studies which re-assess some basic concepts upon which this research is based.

Firstly, from a methodological viewpoint, this study largely employed the structural theories. The political economy approach has been recognized to possess potent explanatory strengths and to be especially useful as an organizing contextualization scheme. It should be noted, however, that theoretical presumptions might dismiss the decision-making by human actors working within the same context. It is argued that through structure-agency interaction, actors create main organizational forms within which their lives are constructed (Giddens 1984). The sequence of the exercise of choices comprises the empirical sphere. Individuals operate in a variety of manners according to the materials and information made available to them in their cultural contexts (Johnston 1986: 23). For instance, adaptive strategies devised by farmers in their interaction with the agro-ecosystem are often overshadowed by a higher level of context. Moreover, an ethical recognition of ecology is still more related to the adaptive dynamics approach, which has revealed the environmentally suitable land use and agricultural practice by local inhabitants (Zimmerer 1996: 176). Despite those advantages, this study did not incorporate the context of agro-ecosystems of South Korean agriculture, but rather tried to bridge the perceptible chasm between the structural analysis of political-economic context and the attitudes and potential behavioral response of individuals acting within this context. Accordingly, the study of the restructuring process of the world agro-food system also needs to connect macro-level, socio-economic changes with micro-level, eco-environmental aspects of local farming.

Secondly, as indicated earlier, the findings from quantitative analysis of the survey data should be interpreted with caution. Without exception, it cannot be assumed that relationships of variables found to be statistically significant in one aggregate of a population (e.g. at the provincial level) necessarily apply to all others. This points to the well-known "ecological fallacy" referring to the error of making an inference of characteristics of individuals from aggregate data. Any related opinion surveys need to be verified with a rigorous sampling method. The scale items of the questionnaire and the methodology employed in quantitative analysis, however, may be applied to other nation-states as well as other South Korean regional settings in seeking to better comprehend the changing political and social relations of rurality. The research findings based on the selected three provinces in South Korea are worthy of reexamination from not only spatial but also temporal comparative studies. Indeed, the nation's colossal socio-economic transformation triggered by the financial crisis which lingered from the late 1997 to 1999 appear to have an immense impact upon a value system of farming communities as well as the whole society. The far-reaching restructuring and deregulation of the economic sub-sectors under the IMF bailout programs involved the massive layoff of urban wageworkers and a concomitant social upheaval. Comparative studies based on temporally-discrete surveys or longitudinal data analysis, therefore, would allow consideration of change over time and could be utilized in assessing the effects of various rural development programs.

Thirdly, another limitation of this study is related to the absence of gender issues, which may deal with the social and cultural-political relations of a farm household labor allocations and rurality. In the current study, the farm family has been represented solely by the male head of household under the common patriarchy of rural Korea, thereby not encompassing women's attitudes towards rural social life and labor relations. Due to the escalating labor shortages, women's contribution to sustenance and production has been especially vital in farm livelihood strategies. To date, the subordinate position of women has persisted in Korean society organized according to the principles of patriarchy and fundamental Confucian ideas. The legal dependence of women on a male head of household which is concurrent with the reckoning of descent and inheritance in the male line has led most agricultural policy-makers to overlook women's presence and contribution to farming and rural society. In this respect, women are not provided with access to "information-support systems" which will enable them to improve the quality and productivity of their labor (Fairbairn-Dunlop 1993: 223). As Momsen and Kinnaird state, "the context within which women deal with contemporary crises and the nature of the crises themselves" do not correspond with prevailing ideas and, thus, need to be addressed within various regional/local circumstances (Momsen and Kinnaird 1993: 5). A broad range of gender research agendas such as the inequalities of farmland succession, the migration of younger rural women, and rural labor relations including the discrepancies of wages between male and female workers offer a new channel for rural geography and

policy-making (e.g. Whatmore et al. 1994). The accumulation of both conceptual and empirical research in this direction will contribute to practices in the policy community.

Finally, rural areas portrayed in this study implicate a dichotomous notion posited opposed to urban areas. This was primarily for the purpose of designating and collating data from sub-provincial administrative districts. Nevertheless, in reality, the convoluted nature of any geographical/spatial unit can be better situated in rural-urban continuum than in either rural or urban extremes. The level of resolution in defining rural localities predicates upon any specific research purposes, yet future studies should take into account the continuum concept.

In conclusion, agricultural reform policies in South Korea include the establishment of a price-driven market economy and acceptance of world prices as the basis of producer and consumer prices. Moving towards freer markets based on the tenets of the WTO, the IMF, and the OECD, South Korea is undergoing a turbulent transition period, an agony which impinges on a majority of farmers who are already vulnerable and distraught with huge indebtedness. Structural and attitudinal changes in the agro-food system is an area where constant research efforts are needed. The impact of the liberalization of agricultural trade on the production-consumption relations, the livelihoods of farm families, and the extant regional disparities need to be explored with further elaborate quantitative and qualitative analyses. Harnessing the agriculture, trade, and environment interface

would help find a way to provide equitable economic bases to individual farms and rural communities.

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APPENDIX A. SURVEY FORM

1. Please write your address.

_____Do (province) _____Gun (county) _____Up/Myun (township)
_____Li (village) _____Burak (community)

2. Do you have any family members, including yourself, who have been designated as a farming successor (by the government) ? ( )

(1) Yes (2) No

3. The following items are the questions about living conditions in rural areas. Please select one answer which corresponds to the degree of your satisfaction with each category.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
(1) Transportation (roads and means of transportation)	1	2	3	4	5
(2) Medical/Health Care System	1	2	3	4	5
(3) Cultural/Educational Facilities	1	2	3	4	5
(4) Quality of Water/Sewage Facilities	1	2	3	4	5
(5) Quality of Housing Facilities	1	2	3	4	5
(6) Garbage Disposal/Sanitation	1	2	3	4	5
(7) Shopping Convenience	1	2	3	4	5

4. The following items indicate some of the social problems in rural areas. Please select one answer which represents how important each category is to your life.

	Not Important	Little Important	Neutral	Important	Very Important
(1) Difficult for Young Farmers to Find a Potential Wife	1	2	3	4	5
(2) Increase in Abandoned Houses and Fields	1	2	3	4	5
(3) Difficult to Change Agriculture-only Zoning	1	2	3	4	5

5. The following items indicate some of the economic problems in rural areas. Please select one answer which represents how important each category is to your farming.

	Not Important	Little Important	Neutral	Important	Very Important
(1) Shortage of Labor	1	2	3	4	5
(2) Difficulty in doing the farming due to aging	1	2	3	4	5
(3) Growing Debt Burden	1	2	3	4	5
(4) Few Non-Agricultural Jobs	1	2	3	4	5
(5) Open Markets	1	2	3	4	5
(6) Rising Production Costs	1	2	3	4	5
(7) Current Inefficient Marketing	1	2	3	4	5

6. The following are the questions about government policies. Please select one answer which best expresses your opinion about each category.

	Never	No, hardly	Neutral	Yes, a little	Yes
(1) Do you think that the government's agricultural policies are consistent?	1	2	3	4	5
(2) Have you benefitted from any post-opening farm policies?	1	2	3	4	5
(3) Have Agricultural/Livestock Cooperatives contributed to agricultural development?	1	2	3	4	5

7. The following are the questions about agricultural market opening. Please read the statements and select only one answer that best expresses your opinion about each statement.

	Strongly Disagree				Strongly Agree
	Disagree	Agree	Neutral	Disagree	Agree
(1) The government's decision to open agricultural produce market was inevitable in view of the trade friction between Korea and other countries.	1	2	3	4	5
(2) Agricultural market opening will modernize Korean agriculture.	1	2	3	4	5
(3) Agricultural market opening is for the sake of exports of Korean manufactured goods.	1	2	3	4	5
(4) Open markets will lower income.	1	2	3	4	5
(5) Better rice can be competitive with rice.	1	2	3	4	5
(6) Urban residents benefit from price decreases due to imports.	1	2	3	4	5
(7) More agro-industrial zones will help raise my income.	1	2	3	4	5

- The following are the questions about your household economy and future plans. Please select one answer to each question.

8. How much is your gross annual agricultural income ? ( )

(1) Less than 7,000 thousand won
(2) 7,000 - 12,000 thousand won
(3) 12,000 - 17,000 thousand won
(4) 17,000 - 22,000 thousand won
(5) 22,000 - 27,000 thousand won
(6) 27,000 - 32,000 thousand won
(7) 32,000 - 37,000 thousand won
(8) Greater than 37,000 thousand won

9. How much are you in debt? ( )

(1) No debt
(2) Less than 7,000 thousand won
(3) 7,000 - 10,000 thousand won
(4) 10,000 - 15,000 thousand won
(5) 15,000 - 22,000 thousand won
(6) 22,000 - 31,000 thousand won
(7) 31,000 - 42,000 thousand won
(8) Greater than 42,000 thousand won

10. How has your agricultural income changed after the agricultural market opening? ( )

(1) It has increased.
(2) It has decreased.
(3) It has little changed.
(4) It has been the same.

11. In the previous question (# 10), if you answered that your agricultural income has increased, what was the major reason ? ( )

(1) Due to an increase in the cultivated land
(2) Due to improvement of the quality of produce
(3) Due to an increase in yields per unit area
(4) Due to improvement of agricultural infrastructure from the government investment
(5) If there are any other reasons, please write those here.
( )

12. In the previous question (#10), if you said that your agricultural income has decreased, what was the major reason? ( )

(1) Due to a decrease in the cultivated land
(2) Due to a decline in the quality of produce
(3) Due to a decrease in yields per unit area
(4) Due to a difficulty in competing with imported produce
(5) If there are any other reasons, please write those here.
( )

13. How long will you plan to continue farming? ( )

(1) Less than 3 years
(2) 3 - 5 years
(3) 5 - 10 years
(4) More than 10 years

14. What is your plan for the farming scale within five years? ( )

(1) To enlarge the scale
(2) To reduce the scale
(3) To keep the current scale
(4) To stop farming

15. In the previous question (#14), if you answered that you would reduce the farming scale or stop farming, what was the main reason? ( )

(1) Due to a decrease in agricultural income
(2) Due to labor shortages
(3) Due to a difficulty in doing the farming with aging
(4) In order to get a different job
(5) If there are any other reasons, please write those here.
( )

16. In the previous question (#14), if you said that you would stop farming, what would you do with the land? ( )

(1) Bequeath the land to children
(2) Rent out the land
(3) Sell the land
(4) Leave the land idle
(5) Others

17. If you plan to bequeath the land to children, do they have any intention to do farming? ( )

(1)Yes (2) No

18. In the previous question (#14), if you said that you would enlarge the farming scale or keep the current scale, please write the names of three major crops that you plant to grow.

	Crops	Land Area
(1)	_____	_____
(2)	_____	_____
(3)	_____	_____

- The following are the questions about your family.

1. Information on Family Members (Please write only about family members currently living together in your residence.)

	Relationship	Gender	Age	Occupation	Education
1					
2					
3					
4					
5					
6					
7					
8					
9					

[Occupation]
(1) Student
(2) Agriculture, Hunting, Forestry Fishing and Related Workers
(3) Production Workers, Transport Equipment Operator, and Laborers
(4) Sales and Service Workers
(5) Administrative, Clerical, and Professional Workers
(6) Unemployed
(7) Others

[Education]
(1) No Formal Education
(2) Elementary School Graduate
(3) Middle School Graduate
(4) High School Graduate
(5) College Graduate or Higher

2. Cultivated Land

Unit: *pyong*

Classification		Paddy	Field	Orchard	Other
Planted Area	Owned				
	Borrowed				
Leased Out					

3. Crops: Please write the names of three crops making the highest earnings in your farm.

	Grains/ Potatoes		Orchards		Vegetables		Oil and Cash Crops		Livestock	
	Crop	Land	Crop	Land	Crop	Land	Crop	Land	Crop	Land
1										
2										
3										
	[Grains/Potatoes] (1) rice (2) barley (3) wheat (4) millet (5) sorghum (6) corn (7) buck wheat (8) soybean (9) red bean (10) green bean (11) potato (12) sweet potato (13) others		[orchard crops] (1) apple (2) pear (3) peach (4) grapes (5) persimmon (6) plum (7) others		[vegetables] (1) melon (2) water melon (3) tomato (4) straw berry (5) cucumber (6) pumpkin (7) egg plant (8) Chinese cabbage (9) radish (10) spinach (11) cabbage (12) carrot (13) pepper (14) garlic (15) green onion (16) ginger (17) floriculture (18) others		[oil and cash crops] (1) sesame (2) perilla seed (3) peanut (4) rape seed (5) mushroom (6) tobacco (7) ginseng (8) mulberry (9) others		[livestock] (1) cattle (2) hog (3) chicken (4) horse (5) rabbit (6) duck (7) bees (8) others	

4. Annual income

(1) Gross annual agricultural income _____ten thousand won

- Rice _____ten thousand won
- Field crops _____ten thousand won
- Orchard crops _____ten thousand won
- Livestock _____ten thousand won
- Others _____ten thousand won

(2) Gross annual non-agricultural income _____ten thousand won

- Salary (Regular) _____ten thousand won
- Business (Self-Management) _____ten thousand won
- Wages (Irregular) _____ten thousand won
- Others _____ten thousand won

(3) Other income (Transferred income from children or other family members) _____ten thousand won

5. Yearly expenditure _____ten thousand won

(1) Annual expenditure on farming _____ten thousand won
(2) Annual living expenses _____ten thousand won
(3) Other expenses (including savings) _____ten thousand won

6. Total debts _____ten thousand won

(1) Agricultural Cooperatives (including Horticultural/Livestock Cooperatives) _____ten thousand won
(2) Commercial banks _____ten thousand won
(3) Private loans _____ten thousand won

- Debts for investment in farming _____ten thousand won

7. What do you think about agricultural trade liberalization? How does agricultural trade liberalization affect your family and farming? Please feel free to write your thoughts.

8. For your family, what are your plans for the next five years? Please feel free to write your thoughts.

APPENDIX B. FARM HOUSEHOLD SURVEY IN SOUTH KOREA

1. Period: May - July of 1997

2. Survey Areas

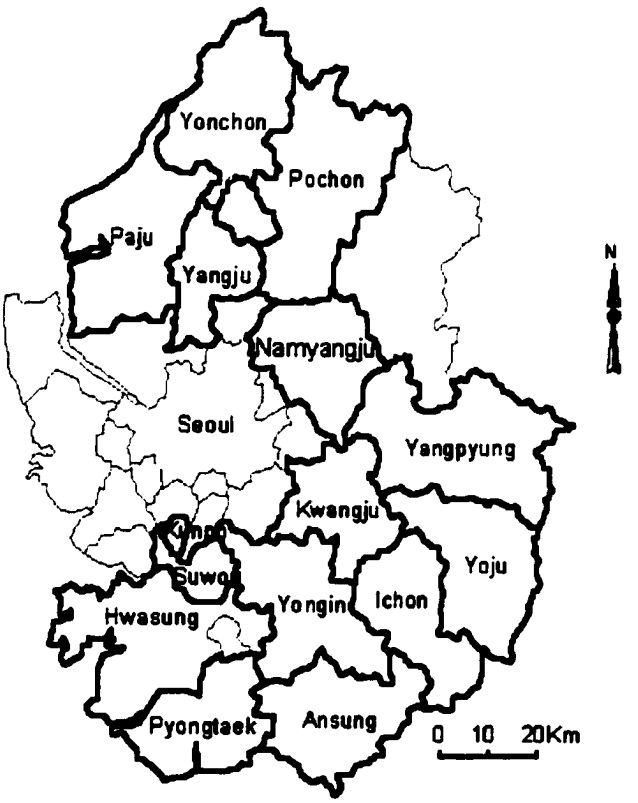
(1) Interviews with farmers:

- Kyonggi Province: Ichon-shi, Suwon-shi, Pyongtaek-shi, Hwasung-gun
- Chunbuk Province: Chongup-shi, Taein-myun
- Kyongbuk Province: Yongju-shi, Andong-shi, Bonghwa-gun

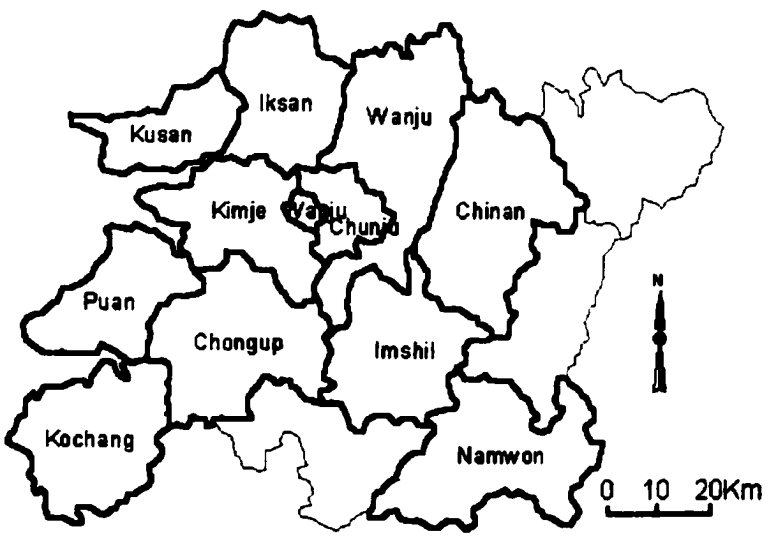
(2) Interviews with government officials:

- Business Consultation Division
  Ichon-shi Rural Guidance Office
  21-1 Joong-li, Ichon-shi, Kyonggi Province
- Technology Transfer Division
  Pyongtaek-shi Rural Guidance Office
  94-1 Suksong-li, Osung-myun, Pyongtaek-shi, Kyonggi Province
- Technology Transfer Division
  Chongup-shi Rural Guidance Office
  362 Sang-dong Chongup-shi, Chunbuk Province
- Taein Farmers' Consultation Office
  Taechang-li, Taein-myun, Chongup-shi, Chunbuk Province
- Technology Transfer Division
  Andong-shi Rural Guidance Office
  1435-2 Yongsang-dong, Andong-shi, Kyongbuk Province
- Technology Transfer Division
  Bonghwa-gun Rural Guidance Office
  Bonghwa-gun, Kyongbuk Province

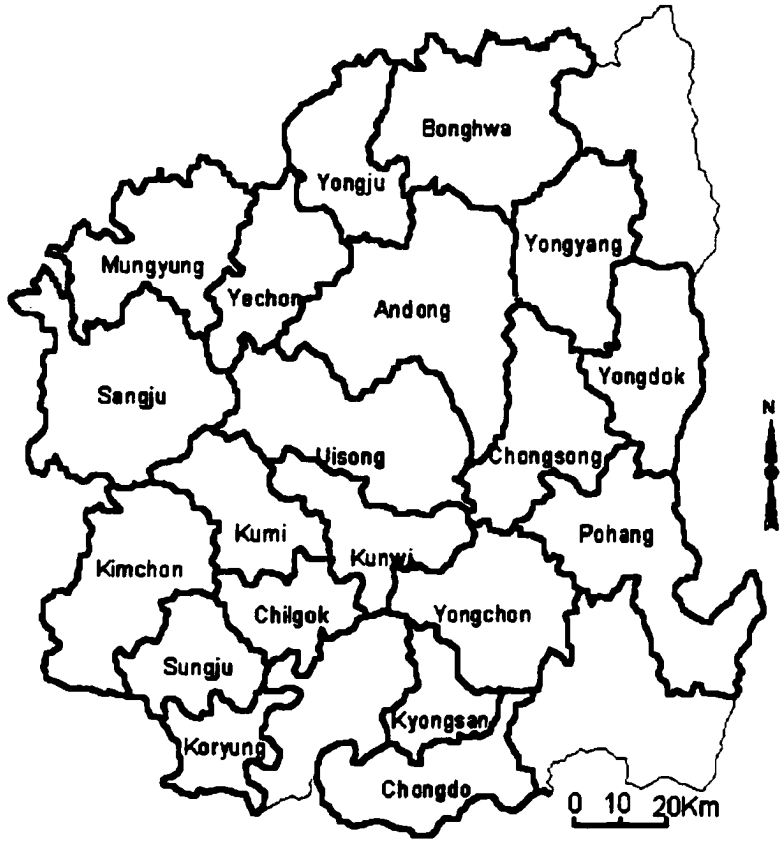
APPENDIX C. ADMINISTRATIVE DISTRCITS (*SHI AND GUN*) INCLUDED IN THE MAIL SURVEY, KYONGGI PROVINCE



APPENDIX D. ADMINISTRATIVE DISTRICTS (*SHI AND GUN*) INCLUDED IN THE MAIL SURVEY, CHUNBUK PROVINCE



APPENDIX E. ADMISTRATIVE DISTRICTS (*SHI AND GUN*) INCLUDED IN THE MAIL SURVEY, KYONGBUK PROVINCE



APPENDIX F. RESULTS OF HYPOTHESIS TESTS

H1 Location	
(H1-1) Index 1 differs by location.	Supported
(H1-2) Index 2 differs by location.	Supported
(H1-3) Index 3 differs by location.	Supported
(H1-4) Index 4 differs by location.	Not Supported
H2 Types of Farming	
(H2-1) Index 1 differs by types of farming.	Not Supported
(H2-2) Index 2 differs by types of farming.	Supported
(H2-3) Index 3 differs by types of farming.	Not Supported
(H2-4) Index 4 differs by types of farming.	Not Supported
H3-1 Age Groups	
(H3-1-1) Index 1 differs by age groups.	Not Supported
(H3-1-2) Index 2 differs by age groups.	Not Supported
(H3-1-3) Index 3 differs by age groups.	Supported
(H3-1-4) Index 4 differs by age groups.	Not Supported
H3-2 Educational Level	
(H3-2-1) Index 1 differs by educational level.	Not Supported
(H3-2-2) Index 2 differs by educational level.	Not Supported
(H3-2-3) Index 3 differs by educational level.	Not Supported
(H3-2-4) Index 4 differs by educational level.	Not Supported
H3-3 Family Size	
(H3-3-1) Index 1 differs by family size.	Not Supported
(H3-3-2) Index 2 differs by family size.	Supported
(H3-3-3) Index 3 differs by family size.	Not Supported
(H3-3-4) Index 4 differs by family size.	Not Supported
H4 Satisfaction with Living Conditions	
(H4-1) Index 2 differs by satisfaction with living conditions.	Supported
(H4-2) Index 3 differs by satisfaction with living conditions.	Supported
(H4-3) Index 4 differs by satisfaction with living conditions.	Not Supported

APPENDIX G. KOREA'S IMPORTS OF AGRICULTURAL AND FORESTRY PRODUCTS BY NATION

Unit: U.S.$ million (%)

	1993	1994	1995	1996	Major Import Items
Total	7,811	8,176	10,520	10,940	
U.S.	1,937 (24.8)	2,122 (24.4)	3,649 (34.7)	3,950 (36.1)	corn, soybean, wheat, beef
China	1,055 (13.5)	1,195 (13.7)	766 (7.3)	819 (7.5)	corn, herb for oriental medicine, sesame, peanuts
Indonesia	715 (9.2)	694 (8.5)	722 (6.9)	722 (6.6)	plywood, palm oil
Australia	574 (7.4)	593 (7.3)	627 (6.0)	670 (6.1)	sugar cane, beef, wheat
Malaysia	706 (9.0)	613 (7.5)	678 (6.4)	584 (5.3)	lumber, palm oil
New Zealand	344 (4.4)	373 (4.6)	482 (4.6)	467 (4.3)	lumber, beef, deer antlers
Thailand	238 (3.0)	206 (2.5)	278 (2.6)	347 (3.2)	sugar cane, tapioca
Canada	375 (4.8)	NA	241 (2.3)	308 (2.8)	barley, alfalfa
Chile	NA	NA	NA	242 (2.2)	lumber, grapes

Source: Lee, Jae-ock and Yun-kuk Choi, 1997, *Nongsanmul Suip Kaebangiu Younghyang Pyunggawa Suipkwanrijungchaek Banghyang [Evaluations of the Effects of Agricultural Importation Liberalization and Directions on Importation Management Policies]*, Seoul: Korea Rural Economics Institute, p.8.

APPENDIX H. KOREAN DOMESTIC AND INTERNATIONAL PRICES OF MAJOR AGRICULTURAL PRODUCTS

Item	Korean Domestic Price (won/kg) (A)	International Price (won/kg) (B)	(A-B)/B*100 (%)	Tariff Value (%)
rice	1,674	339	393.8	-
barley	710	113	528.3	360
soybean	1,760	274	542.3	541
corn	473	145	226.2	365
beer barley	800	194	312.4	570
green bean	4,123	315	1208.9	675
red bean	2,723	371	634.0	468
peanut	2,488	613	305.9	256
rape seed	812	290	180.0	36
sweet potato	975	234	316.7	428
potato	106	476	-77.7	338
red pepper	6,167	4,131	49.3	300
garlic	1,729	1,138	51.9	400
onion	280	387	-27.6	150
ginger	2,658	896	196.7	419
apple	940	726	29.5	59
orange	1,060	855	24.0	99
grape	1,573	1,614	-2.5	50
sesame	7,950	799	895.0	700
perilla seeds	2,650	670	295.5	60
beef	7,000	4,575	53.0	45
pork	5,000	2,921	71.2	37
chicken	2,200	1,735	26.8	24
honey	3,175	2,001	58.7	270

Source: Lee, Jae-ock and Yun-kuk Choi, 1997, *Nongsanmul Suip Kaebangiu Younghyang Pyunggawa Suipkwanrijungchaek Banghyang [Evaluations of the Effects of Agricultural Importation Liberalization and Directions on Importation Management Policies]*, Seoul: Korea Rural Economics Institute, p.38.
Notes: (1) Domestic and international prices are based on the year of 1996.
(2) Tariff values are calculated from 1995 standard tariff rates.

APPENDIX I. LETTER OF PERMISSION

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October 7, 1999

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Dear Editorial Supervisor:

I am writing you in reference to the research note entitled "Pessimism and Pragmatism: Agricultural Trade Liberalization from the Perspective of South Korean Farmers" accepted in ***Asia Pacific Viewpoint*** (Vol.40, No.3, pp.271-284). As the first author of this manuscript, I would like to get your permission to use this article in my Ph.D. dissertation.

I would appreciate it if you could mail your letter to me at your earliest convenience. Thank you very much in anticipation.

Yours sincerely,

Heesun Chung

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VITA

Heesun Chung was born in Seoul, Korea, on February 27, 1969. She majored in geography at Sangmyung Women's University, where she received a bachelor of art degree with first class honor in 1991. After obtaining her master of art degree in geography from Sangmyung Women's University in 1993, she started her doctoral studies in the Department of Geography and Anthropology at Louisiana State University in 1994. She will be awarded the degree of Doctor of Philosophy in Geography from Louisiana State University in May 2000.

DOCTORAL EXAMINATION AND DISSERTATION REPORT

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Major Field: Geography

Title of Dissertation: Agricultural Trade Liberalization and Uneven Development: The Case of South Korea

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Major Professor and Chairman

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Date of Examination:

November 5, 1999